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" A. BEGG, Bolton.
" T. JACKSON, Altrincham.
" H. WILLIAMSON, Bedale.
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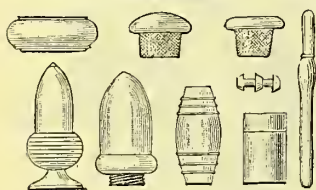
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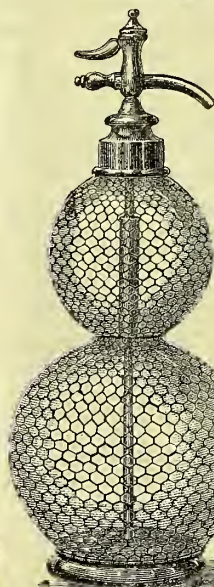
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1883	"	1,307	2 10
1884	"	1,919	0 4
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1886	"	2,170	14 0

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By referring to balance sheet for 1886 you will find that £488 16s. 7d. had to be deducted for Harrogate law expenses, otherwise the profit would have shown a much larger increase over that of 1885.

It is hardly necessary to dilate here on the really wonderful progress made by the Association, nor on the superior quality and excellence of the waters manufactured. A glance at our testimonials will show how thoroughly satisfied the Members are on all these points. We would, however, volunteer our opinion that the Association (notwithstanding that at the commencement it was very tardily supported by the trade) will year by year increase, and that eventually we shall have the general support of the Chemists of the United Kingdom.

LONDON.

HARROGATE.

BRISTOL.

NON-INTOXICATING BEVERAGES.

EASILY AND QUICKLY MADE.

POTTER'S HERB BEER EXTRACT

For the production of a splendid Botanic Beer, with a good colour, flavour, and body, and a creamy head like bottled ale. The demand for this article last year was exceedingly large, and the demand this year bids fair to be still larger. All Chemists will find it a profitable article of sale.

Price, 1/3 per lb. Special quotations for quantity. In 6d. Bottles, 3/6 per dozen.

Supplies of printed matter sent with all 6d. Bottles.

POTTER'S CONCENTRATED BOTANIC PORTER

For making Botanic Porter or Stout. It gives a sweet, palatable taste, good body, and a creamy head like bottled stout, and is likely to become a very popular beverage.

Price, 1/3 per lb. Special quotations for quantity. 6d. Bottles (to make 5 gallons), 3/6 per dozen.

We are prepared to supply 6d. Bottles of both of the above, with our customer's name on both labels and handbills.

THEY WILL KEEP GOOD IN ANY CLIMATE.



Registered Trade Mark

POTTER & CLARKE,

Wholesale and Export Botanic Druggists,

75 Weston Street, LONDON, S.E.

Indian Agents—Messrs. LAWSON & CO., BOMBAY.

Price Lists on application. Telegraphic Address—"HOREHOUND LONDON."

PRIZE MEDAL



HEALTH EXHIBITION.

HAY'S HOP ALE ESSENCE

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.
Is made from the Choicest Hops Grown.

HAY'S HOP ALE ESSENCE is unrivalled or its peculiarly fine Hop Flavour and Aroma.

"A beautiful essence, has a fine Hop Aroma, and is quite a pharmaceutical triumph"

The Chemist and Druggist.

"For this Essence a brilliant future may be anticipated. It possesses characteristics very seldom to be met with."

Mineral Water Trade Review.

"For flavour, strength and real solubility, this Essence leaves nothing to be desired."

British & Colonial Druggist.



HAY'S HOP ALE.

"This is an excellent Non-Alcoholic beverage."

The Lancet.

"It is a Fine Bitter Beer, pouring out with a rich creamy head, possesses a full Hop flavour, and has a most agreeable taste."

British & Colonial Druggist.

"Possesses the Aromatic bouquet and pleasant flavour of the genuine Hop."

Mineral Water Trade Review

"Is a nearer approach to Bass or Allsopp's Ale than any non-intoxicants preceding it."

Eastern Morning News.

Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.

Quantity required, two fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles.

W. HAY, Manufacturing Chemist, Beverley Road, **HULL,**
ENGLAND.

OLD REFINERY BRISTOL

H.W. CARTER & CO'S

SOLUBLE ESSENCES

FOR MINERAL WATERS

Established Fifty two Years

Wholesale Supplies.

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LONDON AGENT:

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10

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W. J. BUSH & CO.'S ENGLISH DRAWN ESSENTIAL OILS.

Always Uniform and of Exceptionally Fine Quality.

THE ONLY MAKERS OF EVERY KIND OF ENGLISH DRAWN ESSENTIAL OILS.

CONCENTRATED FRUIT ESSENCES.

Five or Six times the Strength of, and Vastly Superior to all others.

SOLUBLE ESSENCES.

Much Stronger and Infinitely Superior in Flavour to all Imitations,
consequently cheaper in use.

FRENCH CREAM GUM EXTRACT.

(Protected by Royal Letters Patent.)

For producing froth on Beers, Aerated Waters. &c., &c.

ENGLISH SANDAL WOOD OIL.

Absolutely Pure and always uniform.

Dr. HENDERSON, of Glasgow, writes:—"It is a pure oil of a high character. I have tried it in numerous cases of gonorrhœa; it was rapidly successful in all. The oil disagreed with no one."

THE LANCET states:—"It is admirably adapted for use as a medical agent."

THE BRITISH MEDICAL JOURNAL states:—"It is unusually free from disagreeable taste."

THE CHEMIST AND DRUGGIST states:—"The fact that Dr. Henderson speaks highly of this oil is the best proof of its therapeutic activity."

ARTILLERY LANE, BISHOPSGATE, LONDON, E.C.

BY ROYAL LETTERS PATENT.

HASSALL & Co.'s PHOSPHO-CITRIC ACID*To Supersede Citric & Tartaric for Aerated Waters. It is recommended by the most eminent Physicians in Great Britain.***THE BEST HOUSES IN THE TRADE HAVE ALREADY ADOPTED IT.**

It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids; it is fully £8 per cwt. cheaper than Citric Acid, which mostly contains lead.

WE COMPETE ON QUALITY AND PRICE.

Testimonial from Mr. A. J. MASON, Chemist, of Bexley Heath.

"Having gone carefully into the matter I have no hesitation in saying that the patentees have in no way overrated the merits of their acid. There is no doubt in my mind that Phospho-citric Acid produces a much higher class beverage—giving, as they say, 'greater body'—the one thing needful in this class of goods; also a fruity character and mellowness I have never been able to secure with the ordinary acids. The aroma is also more pronounced. 'Purity' was my great incentive to giving the acid a trial, but I found 50s. or 60s. (citric at 1s. 7d. per lb.) per cwt. an economy not often secured under such favourable circumstances."

Why pay 2/6 per lb. for Citric, when a purer and more efficient Acid can be bought at about $\frac{1}{3}$ the price?**Beware of Imitations.**

Write for Pamphlet and Testimonials.

3-oz. Sample will be sent on receipt of Postage (3 Stamps), or 14 lbs. on approbation.

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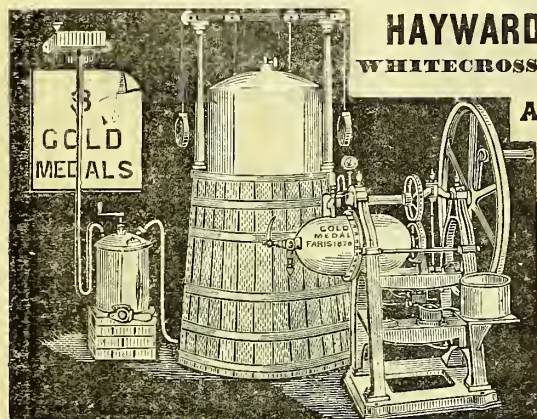
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MANUFACTURER OF HIGHLY CONCENTRATED

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And all other requisites for the manufacture of high-class Aerated Waters.

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WERE AWARDED FOR

**AERATED WATER
MACHINERY,****3 GOLD MEDALS,**

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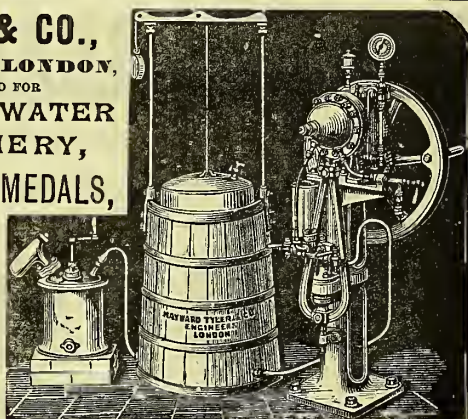
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1884.

CALCUTTA,

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[C 1]

**MESSRS. BROADHURST & CO.,****PORCELAIN MANUFACTURERS,****9 UPPER BEDFORD PLACE, RUSSELL SQUARE,
LONDON, W.C.**

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PRICES ON APPLICATION.

12

"ABSOLUTELY PURE."

REGISTERED.

**ELLIS'S
RUTHIN
WATERS.**

ESTABLISHED 1825.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.
For Gout: Lithia Water, and Lithia and Potass Water.**ASK FOR ELLIS'S.**

SOLD EVERYWHERE.

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MASON'S ESSENCE OF BEEF.

**CONCENTRATED BEEF TEA.
MEAT LOZENGES, &c.**

The Trade would study their interests by introducing our preparations to their customers, for the reason that they are not only the best made, but at the same time the cheapest, and bear a larger margin of profit. A small trial order will prove the truth of the above statement.

Proprietors of the Delicious

"O. K." SAUCE.

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PURE WATER.

IMPORTANT TO CHEMISTS, &c.

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Automatic Distilling Apparatus

Should be in every Pharmacy.
It is Simple, Satisfactory, and Cheap.



Amongst many advantages possessed by these Stills, it may be mentioned that each apparatus being complete in itself, requires but little attention when working; the space occupied is considerably less than is usually the case; it is very ornamental, and easily cleaned. [2]

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BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

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12½ gals. for £1, Cash free.

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WORCESTER SAUCE,
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"BOROUGH" KETCHUP.
BEST VALUE THAT MONEY CAN PURCHASE.

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Established over 40 Years. **WM. BUSH, SON & CO.**
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MARIGOLDINE,

A new Preparation for Colouring Butter, Cheese, &c.

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And breath of odorous Spring."

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A company of Merchants are now selling through SPINNER & CO. the choicest Teas that come from India and China at 2/8, 2/4, 2/, and 1/8 a pound, in packets only. These are the perfection of Teas, and will please the most fastidious.—Agents wanted in every town and village. For Terms apply to SPINNER & CO., 60 Strand, London.

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TEA from China, India, Ceylon, Java, &c., also every variety or grade of **COFFEE**
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In Boxes, 20 lbs. or 40 lbs.; ½-Chests, 60 lbs.; or Chests, 100 lbs. 60 lbs. carriage paid to any Station in England or Wales. Terms—Net Cash with order.

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IN LEAD PACKAGES (½ lb., ¾ lb., or 1-lb.)

Most attractively labelled.

No. 1, 1/	No. 2, 1/2	No. 2a, 1/3	No. 3, 1/4	No. 3a, 1/5	No. 4, 1/6	No. 4a, 1/7½	No. 5, 1/9	No. 6, 2/	X, 2/4
1/4	1/6	1/8	1/11	2/2	2/6				

Duty-paid prices.

(For Export under Bond, 6d. per lb. less.)

FINE COFFEES (Roasted)—

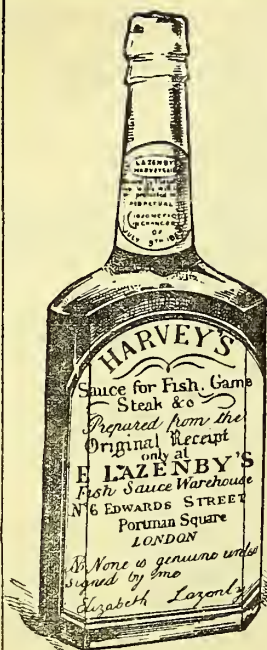
1/	1/1	1/2	1/3	1/4	Choicest Mocha or Mysore, 1.5
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In 28-lb., 56-lb., or 112-lb. Bags; also supplied Raw or Ground. Cash, less 2½ per cent. discount.

THE NEW FRENCH COFFEE—CAFÉ FRANÇAIS

to sell at 10d., 1/1, 1/4, and 1/6, in ½-lb., ¾-lb., and 1-lb. Canisters. Most tastefully labelled without any firm's name appearing.

Export Department.—Teas or Coffees in Bond. Shipped to any part of the world. Terms, f.o.b. London against banker's credit or remittance. Samples, Price Current, and every information on application with pleasure.



LAZENBY'S HARVEY'S SAUCE

For FISH, GAME, STEAKS, &c. In use for now
nearly a century.

CAUTION.—Each bottle of the celebrated Sauce prepared from the ORIGINAL RECIPE bears the well-known Label signed “Elizabeth Lazenby,” without which none can be genuine.

E. LAZENBY & SON, 18 Trinity Street, London. S.E.

LAZENBY'S SOUPS

Soups in Tins

MULLIGATAWNY

OXTAIL

GRAVY

&c. &c.



Soups in Tins

MOCK TURTLE

JULIENNE

HARE

&c. &c.

These Soups are prepared ready for immediate use, and when heated require no other addition than that of Water.

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BARRETTS PATENT STOPPERS

MIXED PICKLES
PREPARED BY
E. LAZENBY & SON
(8 EDWARDS STREET, PORTMAN SQUARE)
18 TRINITY STREET
LONDON. S.E.

HARVEY'S SAUCE. — CAUTION. — The admirers of this celebrated Sauce are particularly requested to observe that each bottle bears the well-known label signed "ELIZABETH LAZENBY"; this label is protected by perpetual injunction in Chancery of the 9th July 1858 and without it none can be genuine.

Elizabeth Lazenby

AGENTS FOR THE UNITED KINGDOM
E. LAZENBY & SON, LONDON.

FEEDING BOTTLES.



SPECIAL PARCELS



E. A. HEARN & CO.

Beg to inform the Trade that in consequence of the Great Demand for their

NEW IMPROVED PATENT FEEDERS

And the pleasing Testimonials received daily from many *well-known Firms* who have bought these Goods, they have determined to send out a limited number of

ONE GUINEA ASSORTED PARCELS,

EACH CONTAINING AS UNDER:—

One dozen of their No. 1 Green Glass, White Fittings.			
*Three	„	No. 3 White	„ Black „
*One	„	No. 5	„ „ „

(Extra Quality, in handsome Cardboard Boxes.)

* These are fitted with our "Improved Patent Glass Screw Stoppers."

E. A. H. & Co. have decided upon doing this in order that all in the Trade who have not already given them a trial may see for themselves the EXCELLENT VALUE of their Goods.

If in any case a Parcel should not give the purchaser ENTIRE SATISFACTION, the Goods may be returned and the money will be refunded in full.

If preferred, the cash may be placed in the hands of any of the London Wholesale Houses, who may be instructed to remit to us only upon the Goods being APPROVED OF.

CHEMISTS and others dealing in this line of goods CAN, and WILL, greatly increase their trade by selling these well-known Bottles, as they are acknowledged by all who have tried them to be the MOST SALEABLE and THE BEST VALUE in the Market.

Cash must in all cases accompany orders for these Special Parcels, either direct to us or to a London Wholesale House, as stated above.

We guarantee these Goods to be of FIRST-CLASS QUALITY only. WE INTEND TO MAINTAIN OUR REPUTATION FOR VERY BEST GOODS, and will not send out inferior qualities.

GIVE US A TRIAL, and your future Trade will be secured.

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And at MANCHESTER, GLASGOW, and PARIS.

N.B.—If at any time orders for our Goods should be sent through any of the Wholesale Druggists or Drug Sundry Houses, please be particular in **DISTINCTLY STATING** that the make of E. A. HEARN & Co. is required, or otherwise disappointment will ensue.

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Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

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MINERAL WTS

Æsculap
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richshall and Apollinaris)
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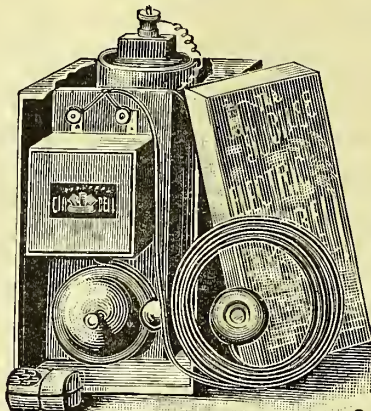
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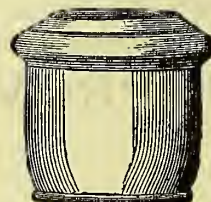
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Our Boxes being made of White English Willow will not injure the most delicate preparations, and will be found quite free from the objectionable oily smell of some Boxes now being sold.

BEFORE ORDERING TURNED WOOD BOXES PLEASE

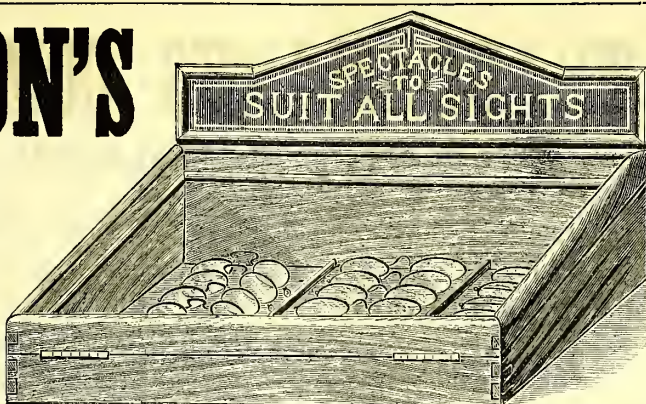
OUR SAMPLES AND PRICES.

DARTON'S

SHOW CASES

of

SPECTACLES.



CHEMISTS commencing the Spectacle business will find these Show Cases arranged with an assortment of Spectacles and Folders of all sights, to meet the requirements of purchasers. The quality and quantity may be varied to suit any class of trade at customer's wish. The Spectacle Show Case is of Solid Polished Mahogany, well made and finished, to stand any climate. Large Coloured Show Cards sent with each case, with descriptive pamphlet, &c.

"THE CHEMIST AND DRUGGIST," May 15, 1886, says:

"Messrs. F. DARTON & CO., of 45 St. John Street, West Smithfield, who have long made a speciality of supplying Chemists with spectacles and some scientific instruments, and have thus gained considerable experience as to the requirements of beginners in the business, have followed up this experience by fitting up a number of show cases with various stocks, enabling chemists to start in the trade with the minimum of risk and the maximum of facility. The cases are well made, and are quite ornamental, and the spectacles are sold at very moderate wholesale prices, presenting an opportunity for a rate of profit to which chemists are getting unaccustomed."

The following is a summary of the contents of our £2 2s. Case, which bears a profit of 36/., after paying for Show Case and Sight Tester, for which we allow 15/- if not required.

	s.	d.
2 Dozen Steel Frame Spectacles, Joints, with Screw and Pin to sell 1/0 per pair	7	0
1 " Ditto, better quality, stout frames, Straw or Blue Steel " 2/6 "	10	6
1 " Folders, Steel Frames and Placquets " 1/0 "	5	6
1 " Leather Tuck Spectacle Cases " 6d. each	2	6
1 " Folder Cases " 4d. "	1	6
Show Case and Sight Tester	15	0
	£2	2 0

Our £3 3s. Case contains—

	s.	d.
2 Dozen Steel Frame Spectacles, Joints, with Screw and Pin to sell 1/0 per pair	7	0
1 " Better quality ditto, Straw or Blue Steel, best White Glasses " 3/6 "	15	0
1 " Folders, Steel Frames and Placquets " 1/0 "	5	6
1 " Best Nickel Folders " 3/6 "	16	0
1 " Spectacle Cases, Leather " 6d. each	3	0
1 " Folder Cases " 4d. "	1	6
Show Case and Sight Tester	15	0
	£3	3 0

Our £6 6s. Show Case contains—

	£	s.	d.
2 Dozen Steel Frame Spectacles, Joints, with Screw and Pin to sell 1/0 per pair	7	0	
1 " Ditto, better quality " 1/6 "	6	6	
1 " Ditto, better quality, stout frames, Blue or Straw Steel " 3/6 "	15	0	
1 " Light Straw Steel Spectacles " 5/6 "	1	4	0
1 " Folders " 1/0 "	5	6	
1 " Ditto, Nickel " 3/6 "	16	0	
1 " Ditto, light grooved, Invisible " 5/6 "	1	1	0
1 " Frog Mouth Cases " 1/0 each	7	0	
1 " Tuck Cases " 6d. "	2	6	
1 " Folder Cases " 4d. "	1	6	
Large size Show Case and Sight Tester	1	0	0
	£6	6	0

Our £10 10s. Case contains—

	£	s.	d.
3 Dozen Steel Spectacles, Joints, with Screw and Pin to sell 1/0 per pair	10	6	
2 " Ditto, better quality " 2/6 "	1	1	0
1 " Light Straw Steel ditto, best White Glasses " 5/6 "	1	4	0
1 " Invisible ditto, ditto " 6/6 "	1	10	0
1 " Blue and Straw Steel Frames, with Pebble " 7/6 "	1	13	0
1 " Tinted Spectacles, assorted colours " 2/6 "	10	6	
2 " Folders, Steel Frames and Placquets " 1/0 "	11	0	
1 " Ditto, Nickel and Shell Placquets " 3/6 "	16	0	
1 " Ditto, Light Invisible " 5/6 "	1	1	0
1 " Best Morocco Frog Mouth Cases " 1/0 "	7	0	
1 " Leather Tuck " 6d. "	2	6	
1 " Folder Cases, best " 6d. "	2	6	
Large size Show Case and Sight Tester	1	1	0
	£10	10	0

LARGER ASSORTMENT OF SUPERIOR PEBBLE SPECTACLES AND FOLDERS, &c., £21.

Send for fully Illustrated Catalogue and Descriptive Pamphlet, with Table of Sights, post free on receipt of Trade Card.

Please order in full, Darton's Show Cases of Spectacles, when ordering through your Agents.

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As specially noticed in the *Lancet*, *Chemist and Druggist*, &c., can be obtained only of the Inventors and Makers; cannot get out of order, and are therefore specially suited for export.

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Darton's Improved Imperishable Index in German Silver or Vulcanite cases, 4, 5, or 6 inch .. 36/ per doz.
Ditto, improved broad bore, lens-side magnifying, &c. 48/ "
Ditto, lens-front magnifying 72/ "

One bent and one straight 6-in. Clinical Thermometer in morocco snap-case 8/ the set.
Special terms to large buyers. All our tubes we warrant. Kew Certificates to any of above.

Order in full, "Darton's Clinicals only required."

F. DARTON & CO.,
WHOLESALE OPTICIANS, MAKERS TO HER MAJESTY'S GOVERNMENT,
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LONDON TRADE MARKS COMMITTEE,

1 CASTLE STREET, HOLBORN.

Information and Suggestions are invited from **TRADE MARK OWNERS** with regard to the further legislation necessary, with a view to securing complete Protection against the continued Infringements of British Trade Marks.

EDMUND JOHNSON, HONORARY SECRETARY.

TRADE MARK PROTECTION SOCIETY,

1 CASTLE STREET, HOLBORN.

The Organisation and Objects of the Society (established in King Street, Cheapside, in 1871) comprise the following:—

DEPARTMENT I.—REGISTRATION OF TRADE MARKS.

- (a) Registration in the United Kingdom.
- (b) Registration in Foreign Countries.
- (c) Registration in British and other Colonies.

DEPARTMENT II.—SEARCHES IN RESPECT OF TRADE MARKS ALREADY REGISTERED.

- (a) Home.
- (b) Foreign and Colonial.

DEPARTMENT III.—INVESTIGATION AND REPORTS AS TO INFRINGEMENTS.

DEPARTMENT IV.—LITIGATION.

- (a) Superintendence by the Society of legal proceedings, conducted by its Solicitors, in respect of Infringements of British Trade Marks Registered under the Acts 1875-77, and the Patents, Designs, and Trade Marks Act, 1883.
- (b) Proceedings in Foreign Countries in respect of Infringement of British Trade Marks.
- (c) Proceedings in British and other Colonies.

Trade Mark Owners so desiring can affiliate themselves, without any subscription, by communicating with

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The **CLASSIFIED COLLECTIONS**, comprising upwards of 30,000 **BRITISH** and **FOREIGN TRADE MARKS**, may be referred to daily, between 11 and 4, by Manufacturers and Merchants who have Registered, or contemplate Registering, under the recent Acts. Admission free on presentation of Business Card.

SOME NEW AGENTS

FOR CHRONIC AFFECTIONS.

Pharmaceutical Improvements.

LANOLINE IN DERMATOLOGY.

"While the Lanoline remains on the surface of the skin, it is simultaneously permeating the epidermis and retained by this, a property which no other known basis possesses." The LANCET says:—"By many Lanoline will be considered the greatest discovery of the year." Its application in over 400 cases of skin diseases was not followed by irritation of the skin in a single instance.

"I took special interest," said Prof. Liebreich, at Brighton, "in a case of sycosis vulgaris, which had been wrongly diagnosed as parasitic sycosis. The patient, a young man aged 19, had suffered five years from the disease, and had been treated without success, not only by all the usual means, but also by a preparation of Lanoline; the latter, however, was of bad quality, and a rapid improvement took place as soon as the pure substance was employed."

Lanoline has been used as a basis for ointments in scrofuloderma, pruritus, erythema, sycosis, tinea versicolor, epithelioma, lupus and common ulcers, eczema on all parts of the body, and dermatitis, etc.

The most satisfactory results are recorded of it with chrysarobin in psoriasis (Lassar), tinea favosa of 8 years' duration (Wende), herpes tonsurans, and pityriasis versicolor. With salicylic acid it has worked well in eczema. An ointment of it containing mercury produces no irritation, and its unprecedented usefulness on this account is obvious. "It is preventive of the formation of crusts" (Frankel), lessens the secretion of pus, and is employed extensively by surgeons and gynaecologists instead of vaseline, &c.

PEPTONISED MILK IN CHRONIC DYSENTERY.

From his experience with chronic dysentery at the Dreadnought Hospital, Dr. Harry Leach concluded that drugs were of no avail in this affection, and that perfect rest and an assimilable nutritious diet could alone effect a cure. The milk diet, as introduced by a distinguished writer on the diseases of India, has been modified somewhat by peptonising the milk (to remove the dangers of curds), and the results obtained have been truly brilliant in those cases where recumbency was maintained, and this line of treatment persistently and faithfully carried out. In the beginning, the milk should be kept warm for at least forty minutes after a Peptonising Powder (Fairchild) has been added to it. Further advantages are afforded with Zymine, for as the weeks go by beef-tea and other foods may be peptonised with it. Dysentery has been cured with peptonised foods.

TEREBENE IN CHRONIC BRONCHITIS.

The inestimable benefits conferred by Pure Terebene (Burroughs), in chronic bronchitis, are widely known. The evil effects complained of by some who have tried Terebene may be largely explained by letters like the following:—

"SOUTH DEVON AND EAST CORNWALL HOSPITAL,
"March 15th, 1887.

"DEAR SIRS,

"... The Pure Terebene (Burroughs) we have used in a bad case of bronchitic asthma with the best results. No irritation of the throat, as one finds with crude preparations—in fact the patient could not take the so-called 'Pure Terebene' *other than yours*. . . .

"Yours truly,

"R. M. LUCY, *House Surgeon*.

"To MESSRS. BURROUGHS, WELLCOME & CO."

CASCARA "TABLOIDS" IN CONSTIPATION.

The poisonous effects of long retaining the excreta in the body, and, on the other hand, the deleterious action resulting from the continued use of active cathartics, have occasioned perplexity as to the most efficient mode of correcting constipation. The most popular agent for this complaint is Cascara Sagrada, the most convenient form of which is the Tabloids; these are made with chocolate, are pleasant to take, and differ from pills in that they are easy to swallow. They are soluble and efficient. It should be added, that the difference with which Cascara affects different people is sometimes considerable, a very large dose being occasionally required. The usual dose of the Cascara Sagrada Tabloids is one or two at bedtime, or one after each meal. As they can be carried in the pocket by the patient, they are admirably suited for continuous gentle medication.

AMMONIUM FUMES IN CHRONIC CATARRH.

The Burroughs Chloride of Ammonia Inhaler is of simple construction, easy to manipulate, affords neutral fumes, and is ever ready for use; the results obtained with it in catarrhal affections of the nares, Eustachian tubes, middle ear, throat and lungs, have been in the fullest sense satisfactory. Deafness of long standing, due to an extension of the catarrhal condition of the mucous membrane of the throat, has been effectually treated by Chloride of Ammonium fumes.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, E.C.

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PEPTONISING POWDERS (FAIRCHILD).

Zymine (Extractum Pancreatis)	5 grains
Soda-Bicarb.	15 "

Full directions accompany each Box.

In Glass Tubes, 1 doz. in a Box; price per doz. Boxes... .. 22/-

Milk peptonised with these is sweet and palatable, cannot be curdled, and possesses all the assimilable and highly nutritious properties of mother's milk.

"Its value has come home to me in my own family. I believe the life of one of my little ones was saved by it."—J. L. LUDLOW, Sr. Phys. to Presbyterian Hospital, Med. Bd. Philadelphia Hospital.

"I feel satisfied that the question of infant feeding is solved."—Dr. J. M. KEATING.

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SUPPLIED BY THE WHOLESALE TRADE.

WYLEYS' GELATINE COATED OVAL PILLS.

The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List of REDUCED PRICES on application.

POWDERED DRUGS. All ground in our own Mills, and of Guaranteed Purity.

EXTRACTS (ENGLISH).

CONCENTRATED INFUSIONS AND DECOCTIONS. GRANULAR EFFERVESCENT PREPARATIONS.

GELATINE COATED HORSE BALLS (PATENTED).

Forwarded on application { PRICES CURRENT, LIST OF SPECIALITIES, PILL LIST (GELATINE OR PEARL COATED).

WYLEYS & CO., COVENTRY.

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THE ACTIVE PRINCIPLE OF ALOES,

MANUFACTURED BY THE DISCOVERERS—

T. & H. SMITH & CO., EDINBURGH AND LONDON.

"The uniformity in strength of Aloin, the smallness of its dose, and the certainty of its action, should commend it to the favourable consideration of all medical practitioners."—*Vide* Dr. Wm. Craig's investigations respecting our Aloin, published in the *Edinburgh Medical Journal* for May 1875.

Edinburgh Address—21 Duke St. London Address—12 Worship St., E.C.

New York Office—20 Cedar Street: FRA^S. JA^S. MACNAUGHTAN, Agent.

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ESTABLISHED 1859.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICE:

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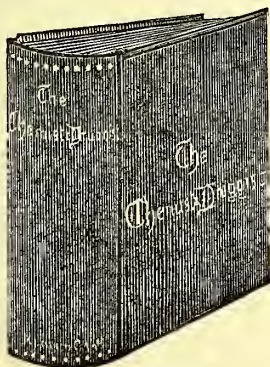
Supplied only to persons connected with the Trade.

For Australasian subscribers the subsidiary journal THE CHEMIST AND
DRUGGIST OF AUSTRALASIA is included.

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ADVERTISEMENTS of employers and assistants can now be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.



closure, nor by any of the carriers, as in the latter case we have to pay for booking.

We give on pages 584–5 portraits and sketches of the first half, alphabetically classed, of the new honorary members of the Pharmaceutical Society. Portraits of the other six (Fraser, Ladenburg, Maisch, Mehu, Pasteur, and Waldheim) will appear next week.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for en-

We have now over a thousand *bonâ-fide* subscribers in Australia—that is to say, a very large majority of the chemists established there. To all of these we supply THE CHEMIST AND DRUGGIST and THE CHEMISTS' AND DRUGGISTS' DIARY from London, and *The Chemist and Druggist of Australasia* from our Melbourne office. British chemists interested in Australasian pharmaceutical affairs can subscribe for the latter publication through this office at the rate of 5s. per annum.

THE CHEMISTS AND DRUGGISTS' TRADE ASSOCIATION OF GREAT BRITAIN.

INSUFFICIENT RESPONSE.

We believe we are correct in stating that the Chemists and Druggists' Trade Association of Great Britain is practically, though it is not formally, defunct. The circular sent out last week to ascertain how many members of the trade would undertake to support the Association on the basis of a half-guinea subscription was professedly an ultimatum. Up to Thursday last less than nine hundred favourable responses had been received, and it is quite certain that the executive will not think of continuing operations on any such income as these would provide. We have reason to believe that Messrs. Glaisyer and Haydon are contemplating the establishment of some sort of private chemists' defence agency, and that their intentions are regarded with approval by the officers of the general Association. They hope to secure the co-operation of Professor Attfield; but we do not know that they have yet formulated their scheme. It is certainly most desirable that the experience gained during the past ten years in trade cases should be still available; and we cannot see any better way of doing this than in the manner vaguely suggested above.

DIARY FOR NEXT WEEK.

Monday, May 16.

Society of Chemical Industry (London Section), Burlington House, at 8 P.M. Dr. C. R. A. Wright, on "The Action of Zinc Chloride on Castor Oil." Messrs. Cross and Bevan, on "Pictet's Wood Pulp System." John Ruffle, on "The Estimation of Moisture in Superphosphates and similar Fertilisers." Mr. Wingham on "English-grown Tobacco."

Society of Arts, Cantor Lectures, at 8 P.M. Mr. J. M. Thomson, F.C.S., on "The Chemistry of Substances taking part in Putrefaction and Antisepsis."

Tuesday, May 17.

Public sales of drysalteries, at the Commercial Sale Rooms, Mincing Lane, E.C., at 1 P.M.

Royal Institution, at 3 P.M. Professor Horsley, on "The Modern Physiology of the Brain, and its relation to the Mind."

Pharmaceutical Benevolent Fund Dinner, Freemasons' Tavern, at 7 prompt.

Wednesday, May 18.

Public sales of spices, at the Commercial Sale Rooms, Mincing Lane, E.C., at noon.

Pharmaceutical Society, 17 Bloomsbury Square, W.C. Annual general meeting at 11 for 12 precisely. Conversazione, South Kensington Museum, at 8 P.M.

Thursday, May 19.

Public sales of drugs, at the New Corn Exchange, Mark Lane, E.C., at 10.30 A.M.

Royal Institution, at 3 P.M. Professor Dewar, F.R.S., on "The Chemistry of the Organic World."

Linnean Society, at 8 P.M.

Chemical Society, at 8 P.M.

Friday, May 20.

Pharmaceutical Society. Adjourned meeting of the Society.

Metropolitan Reports.

THE IMPERIAL INSTITUTE.—The following additional subscriptions to the Imperial Institute from the Pharmaceutical and Chemical Societies have been acknowledged:—

Pharmaceutical Society—Second List.

1st March 1841. Charity			Second List		
	£	s. d.		£	s. d.
Roach, Pope, & Son	..	5 5 0	Bottle, Alexr.	..	1 1 0
Barker, Mathew M.	..	5 0 0	Fletcher, John	..	1 1 0
Gostling, T. P.	..	3 3 0	Gulliver, Wm.	..	1 1 0
Robinson, R. A.	..	2 2 0	Hills, W.	..	1 1 0
Atkins, S. R.	..	1 1 0	Ransom, Francis	..	1 1 0
Barton Bros.	..	1 1 0	Donations under one guinea	3	11 6

Chemical Societies—Second List.

	£	s.	d.		£	s.	d.
James Mason, Esq.	..	50	0	T. Vaughan Hughes, Esq.	1	1	0
J. Denham Smith, Esq.	..	5	0	G. N. Stoker, Esq.	..	1	0
Samuel Hals, Esq.	..	5	0	Robert Bardsley, Esq.	..	1	0
B. Redwood, Esq.	..	2	0	William Thorpe, Esq.	..	1	0
A. Veleker & Sons.	..	2	0	Professor Victor Meyer	..	1	0
W. Killner, Esq.	..	2	0	Thomas Jenner, Esq.	..	1	0
Thomas Purdie, Esq.	..	2	0	Donations under one			
Henry H. Robinson, Esq.	1	1	0	guinea	2	5	0

A DISHONEST DENTIST.—At the Mansion House on Monday, William George Tice was charged with stealing a set of false teeth, of the value of 10*l.* 10*s.*, the property of Messrs. Eskell & Son, dentists, of Ludgate Hill, to whom he had acted as mechanical assistant since November last. The prisoner, without authority, had taken the teeth to the lady who ordered them, received the money, and given a receipt. The prisoner pleaded guilty, and urged that he had a wife and family to support, and that his wife was dying. As his employers did not wish to press the charge harshly against him, sentence of two months' imprisonment was imposed.

ALLEGED OFFENCE UNDER THE MERCHANDISE MARKS ACT.—Samuel Clarke, charged with having used the labels of certain blacking manufacturers for blacking prepared by himself, was brought up on remand on Tuesday at the Marylebone Police Court. Some additional evidence was given, and Mr. Frith, for the defence, urged that the offence had not been proved, as the labels had not been removed from the old bottles, but had simply been brushed up and cleaned. Mr. De Rutzen observed that he did not entertain so limited a view of the section of the Act. The case was one for the consideration of a jury, and he committed the prisoner for trial. The prisoner was admitted to bail.

BAKER v. MALTINE COMPANY.—At the City of London Court on Tuesday, before Mr. Commissioner Kerr, Mr. Alfred P. Baker, trading as the London and County Photographic Company, sued the Maltine Company, of 24 Hart Street, Bloomsbury, for 1*l.* 10*s.* for photographs supplied. The representative of the company said the photographs were supplied to a man who was one of their collectors, and who had no authority to pledge the company's credit. His Honour said the case showed the disadvantage, not to say folly, proceeding from sheer indolence in suing companies and taking orders from companies. The law allowed orders to be given in that way he knew, but the law was to blame, because one never could know with some companies who the orders were given by. Judgment was given for the plaintiff, but the defendant had liberty to have the case tried by jury if he was so desirous.

RECOVERING AN INVESTMENT.—On Tuesday, after six days' hearing in the Queen's Bench Division of the High Court of Justice last week, before Mr. Justice Grove and a special jury, Mr. John Snook, chemist, Oxford Street (Wilcox & Co.), obtained a verdict in an action against the directors of the Self-Acting Sewing Machine Company (Limited), against two of the defendants. The plaintiff sought to recover 500*l.* paid for shares in the company, on the ground that he was induced to apply for them through false and fraudulent representations put forward in the company's prospectus, which was issued in January, 1884. The false representations consisted of statements made in reference to contracts already entered into, the validity of which formed a part of the inquiry. The two directors against whom the verdict was given will have to pay the 500*l.* between them. The plaintiff has to pay the costs of one of the other defendants.

THE AMERICAN EXHIBITION.—The American Exhibition at West Brompton was opened on Monday, May 9, in the presence of some thousands of spectators, including many distinguished members of the scientific and literary world, a fair sprinkling of legislators, and large numbers of the upper ten. The American colony in London, it is almost needless to say, was present in force, and the opening ceremony, if not exactly impressive, was performed with commendable smoothness and brevity. Archdeacon Farrar pronounced a short prayer, very imperfectly heard, and after a few speeches, chiefly eulogistic of the virtues of John Bull and Brother Jonathan, and setting forth the almost superhuman difficulties which the promoters of the concern have had to contend with in the realisation of their object, and an excellent rendering of the "Star-spangled Banner" and "Rule Britannia" by a rising young American singer, the Exhibition was declared open. The audience thereupon *en bloc* made a not very dignified rush for Buffalo Bill's "Wild West Show," and the Exhibition proper was left in a condition of utter emptiness, which would have afforded an excellent opportunity for examining the exhibits had not the latter been mainly hidden from view inside their respective cases, crates, and boxes.

The catalogue comprises the names of 1,078 exhibitors, but of these rather less than one-third have actually put in an appearance. The floor is strewn with unopened packages, and stalls are being hastily erected in all parts of the building.

It has been observed that punctuality is the virtue of kings, and from this point of view unreadiness may perhaps be assumed to be the particular failing of republics; but in this respect much will be changed before the middle of the month, and it would be rash to draw any inference as to the ultimate success of the Exhibition from its present condition of topsy-turviness.

The project of an American Exhibition in London was first mooted at the Philadelphia Centennial Exhibition in 1876, and ultimately it was decided to carry the idea to realisation in 1885; but the South Kensington shows intervened, and the opening was finally deferred until the present year. The object of the promoters is of course purely commercial, and they have not received any subsidy or other assistance from the United States Government—in fact, it is said that a good deal of cold water was thrown upon their endeavours from an official quarter. The Exhibition, however, in the words of its Director-General, will "afford Americans an official *débat* in the biggest market of the Old World, for the introduction of their produce and manufactures," and references in abundance were made in the opening speeches to the advantages of free interchange between the two nations, a freedom which is rather one-sided at present.

The Exhibition is held in a large iron and glass structure, the floor of which is laid out in "streets" and "avenues," the latter named after famous Americans. Six departments, viz., agriculture, mining and metallurgy, machinery, manufactures, education and science, and fine arts, make up the show. The first department, which at present is one of the most incomplete, contains a very few exhibits of pharmaceutical interest, such as woods, shrubs, and seeds from New England; fish glue, sponges, extract of beef, mineral waters, and condiments. The second and third departments are of no interest to the pharmacist from a merely business point of view; in the fifth division the Lippincott Company and Professor Foote, of Philadelphia, exhibit some medical and pharmaceutical works, while the Spencer Optical Manufacturing Company, of New York, and T. H. Harrison, of Boston, enter the field with exhibits of optical and surgical instruments.

The majority of exhibits of pharmaceutical interest must be sought in the block between Fifth and Sixth Streets, near the centre of the Exhibition. Here such well-known firms as W. R. Warner & Co., John Lucas & Co., and B. Brooke & Co., of Philadelphia, together with Seabury & Johnson, H. H. Ayer, E. Morgan, Sons & Co., Charles Judson, McKesson & Robbins, and the Chesebrough Manufacturing Company, of New York, and the Charles A. Vogeler Company, of Baltimore, will have their stands. Messrs. Burroughs, Wellcome & Co., of Snow Hill, and Spratt's Patent (America), Limited, of Bermondsey, also occupy stalls in this section, a detailed review of which must be deferred until the Exhibition shall have attained a more complete state.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BEVERLEY.

STRYCHNINE POISONING CASE.—An adjourned inquest was held on Saturday, before Mr. Jennings, coroner, with respect to the death of Ada Norris, aged eighteen, in the service of Mr. Langdale, farmer, who died very suddenly on the night of April 20. The medical evidence had suggested death by poison, and the inquest had been adjourned in order that an analytical examination might be made. Dr. Baynes, of Hull, the county analytical chemist, now stated that he had discovered in the stomach a large quantity of strychnine. It transpired that the deceased, who only went into Mr. Langdale's service at Martinmas, was six or seven months advanced in pregnancy, but she had not made known her condition to anyone. The police had been unable to find out where she had procured the poison. The jury returned a verdict that the deceased died from the effects of strychnine, self-administered, but how she became possessed of it there was no evidence to show.

BIRMINGHAM.

CORRECTION.—It was mentioned in this section on April 23 that Mr. Riley, chemist and surgeon's *locum tenens*, had closed his branch establishment, Potter's Hill, Victoria Road, Aston, and it was implied by the heading that this was in consequence of "bad times." We have been informed that the establishment was closed only in consequence of disagreement with the landlord. We are sorry to learn that by this inadvertency we have given some annoyance.

LIVERPOOL AND DISTRICT.

MR. JOHN SMITH, chemist and druggist, of Kingsley Road, Liverpool, has secured new premises in an excellent position on Aigburth Road.

MR. W. PEARSON, pharmaceutical chemist, of Waterloo, near Liverpool, has taken over the business of Mr. W. B. Brown, of Seaforth.

ACTING AS APOTHECARIES.—The names of two chemists have got into the papers lately in consequence of their services in emergencies. Last week a dog supposed to be rabid bit two children at Walton. The bites were at once cauterised by Mr. Henry James in the shop of Mr. W. T. Warhurst, 81 County Road. At Runcorn, a clogger named Roach rescued a little girl who had fallen into the canal. Mr. Isaac Speakman, chemist, was sent for, and under his superintendence consciousness was restored.

A NEW PEPPER ADULTERANT.—At the Wigan Petty Sessions on May 6, the Park Lane Friendly Co-operative Society, Ashton, were charged with selling white pepper which was adulterated with spent ginger. A certificate of analysis by Dr. Campbell Brown was submitted, which showed that the pepper contained from 20 to 25 per cent. of exhausted ginger. For the defence it was stated that the defendant society could prove that they bought the article as pure pepper from the Manchester Co-operative Society. A representative of that society stated that the pepper was bought from Messrs. Drysdale, Wallace & Denison, of London. He stated that his society had had many samples of pepper examined by analysts, but their reports varied so much that they had frequently been in a fix as to what they should do. The Bench acquitted the defendant society of blame in the matter, but thought an offence had been committed, and ordered the costs to be paid.

POISONED BY LAUDANUM.—An inquest was held on Monday at Rook Ferry, before Mr. Churton, coroner, on the body of Elizabeth Ritchie, aged forty-three, the wife of a baker. On Saturday the deceased sent a boy to the shop of Mr. Stanton, druggist, Bedford Road, to purchase three-pennyworth of laudanum. The lad brought back the laudanum, which the deceased poured into a cup, and then sent the

lad back to Mr. Stanton's shop for another three-pennyworth, instructing him to say that he had spilt the first quantity. The boy did so, and gave the laudanum to the deceased. At eleven o'clock the same night the deceased was seen in bed by her son. She was moaning, although apparently fast asleep. He did not disturb her, and on Sunday morning she was found dead in bed. It is supposed she had swallowed the whole six-pennyworth of laudanum, as the empty bottle was found in the room. The deceased had been addicted to drink, and, having suffered from insomnia, she was in the habit of taking laudanum to induce sleep. The jury returned a verdict that the deceased had died through taking an overdose of laudanum, but whether for the purpose of committing suicide there was no evidence to show.

SCARBOROUGH.

CHEMISTS AND POSTMEN.—At the Prince of Wales's Circus, on Saturday last, a novel entertainment in the form of a singing contest took place. Fourteen competitors entered the lists, and prizes of 2*l.*, 1*l.* 10*s.*, 1*l.*, and 10*s.* were awarded by vote of the audience. The interesting feature to us about the entertainment was that it was announced that "the proceeds would be divided between the Postmen's and Chemists' Benevolent Funds."

SHEFFIELD.

DEATH UNDER CHLOROFORM.—On Saturday an inquest was held at the hospital on the body of Frank Gambles (14), who died there the previous day, after having undergone an operation. The attendant surgeons (Dr. Keeling and Mr. W. F. Banham) stated that deceased had partially recovered from the effects of the chloroform which had been administered, and was being removed from the room when he fainted. A verdict was returned that the deceased died from syncope whilst under the influence of chloroform during a surgical operation.

TONBRIDGE.

THE WEIGHTS AND MEASURES ACT.—At the Tonbridge Petty Sessions, on Tuesday, Mr. Frederick Edward William Shrivall, chemist, druggist, &c., of Hadlow, was summoned for having unjust and unstamped weights in his possession. Mr. Frances, weights and measures inspector, said that he went to the defendant's shop on April 23, and on examining the weights he found a quarter of a pound weight nine drachms light, and a similar weight half a drachm light. The defendant's father, who was present, took the weights from a drawer under the scales. Defendant's father was very abusive and told him he had better go to the butchers and bakers. One weight had no stamp on it. He had cautioned defendant's father about the weights nearly a year ago. Defendant kept a post office, but he did not touch the post office weights. By the defendant: He did not carry apothecaries' standard weights, but tested by avoirdupois. He would swear that both weights were avoirdupois and not apothecaries' weights. He had tested weights of the various chemists and druggists and they all sold by avoirdupois. He had no copies of apothecaries' weights or he should have tested all the weights. The defendant, who pleaded not guilty, said he was allowed by the Act to sell drugs by retail by apothecaries' weight, which would of course be light if tested by avoirdupois. Mr. Frances had had no experience of apothecaries' weights, which was a question of grains. Mr. Frances said that the defendant sold other things besides drugs, such as salts and senna. Mr. Harris (clerk): Salts are not drugs? The Defendant: Oh, but they are. The Bench said that as there was a doubt both cases would be dismissed.

Mr. Samuel Curtis, grocer, of Cowden, pleaded guilty to having an unstamped weight, and was fined 2*s.* 6*d.* and costs.

WONERSH, SURREY.

PARALDEHYDE POISONING.—On Thursday, May 5, an inquest was held regarding the death of Mr. William Seth Smith, of Tangley. The deceased had been suffering from heart disease for some time, and had been in the habit of

taking paraldehyde. On Sunday he went to sleep in his study, where he was found dead in the afternoon. Dr. James Harmar Smith, of Guildford, who had attended the deceased up to March 22 or 23, but then ceased his attendance, on account of deceased taking the paraldehyde against his wish, was called in, and had since made a post-mortem examination, the result of which was that he found the heart excessively degenerated with signs of atrophy. He also smelt the paraldehyde strongly. In his opinion the cause of death was heart disease, accelerated by the effects of paraldehyde. In reply to the Coroner, he stated that paraldehyde was supposed to agree better with heart disease than any other narcotic if taken moderately, but otherwise it was as much poison as opium. The usual dose was about 50, and occasionally 90, drops. He could never ascertain the exact dose which the deceased took, as he would never let him know. It seemed that the deceased gentleman obtained the narcotic from a firm of London chemists in 12-oz. bottles, and the appearance of the partially filled bottle found in his room tended to show that Mr. Seth Smith took about 2 oz. each day. The medical gentleman added that the deceased was not in the least likely to commit suicide, and had no suicidal mania. The Coroner summed up, and pointed out the utter improbability of the deceased having died from suicide, and by his advice the jury returned a verdict of death from heart disease, accelerated by the excessive use of paraldehyde.

SCOTLAND.

ABERDEEN.

BUSINESS TRANSFERS.—The wholesale business carried on by Messrs. Davidson & Sim for the past twenty years has been disposed of to Mr. W. Sangster, chemist, Dufftown. Mr. Sim is fitting up a shop in Bridge Street. The retail business so long carried on by the late Mr. William Eddie, and latterly by Mr. W. S. Adamson, has been disposed of to Mr. J. Cruickshank, Fraserburgh.

DOCTORS' SHOPS.—"Bon Accord," referring to a paragraph under this heading last week, says:—"Your Aberdeen correspondent makes a very inaccurate report about what he calls doctors' shops. The following are a few facts:—Within the last few years two doctors' shops have been closed, namely, Moir's and Connon's. With regard to Dr. Alexander Reith's opening a new shop in Baker Street, he should have said that he was to remove from George Street (in which street he has been for more than twenty years) to Baker Street. Most of the doctors having shops were chemists at one time. In fact, within the last ten years two pharmaceutical chemists graduated. This being a university town, it is not an uncommon thing for chemists to graduate as doctors." [We do not perceive the inaccuracy of our report.]

ANNUAL DINNER OF A. & N. OF S. SOCIETY OF CHEMISTS AND DRUGGISTS.—The Secretary (Mr. A. Strachan) asks us to insert the following in reference to a paragraph which appeared last week:—"Inadvertently the wording of the motion which became the finding of the meeting last week seems to reflect on the Elgin chemists personally. Such, however, is not the case, for Messrs. Robertson, Smith and Young sent us a most hearty welcome, for which we are truly grateful; but we could scarcely see our way to go so far when the chemists *ex* Elgin, with one exception, seemed so indifferent to meet us *less* than half way."

Gazette.

PARTNERSHIPS DISSOLVED.

BARKER & TRESTRAIL, Aldershot, physicians.

BRICE & ELPICK, High Street, Southwark, brush manufacturers.

ELPHICK & MITCHELL, High Street, Southwark, brush manufacturers.

MOORE, A., F. & H., Liverpool, sponge, twine, and chamois leather merchants. As far as regards F Moore.

THE BANKRUPTCY ACT, 1883.

ADJUDICATIONS.

BROTHERS, WILLIAM, St. Anne's-on-the-Sea, formerly of Livesey Works, near Blackburn, out of business, formerly fire-clay manufacturer and chemical manufacturer.

COOPER, JOHN GREGORY, Chatteris, Cambridgeshire, veterinary surgeon.

ORCHARD, ARTHUR BISHOP CAREY, Ebbw Vale, Monmouthshire, chemist and druggist.

SIMON, S. H., Muscovy Court, Tower Hill, drysalter and commission agent.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

BROTHERS, WILLIAM, St. Anne's-on-the-Sea, Lancashire, formerly of Livesey Works, near Blackburn, formerly fire-clay manufacturer and chemical manufacturer, now out of business. May 17, County Court-house, Blackburn. May 20, County Court Offices, Preston.

ORCHARD, ARTHUR BISHOP CAREY, Ebbw Vale, Monmouthshire, chemist and druggist. May 18, Official Receiver's Office, Merthyr Tydfil. May 27, County Court Office, Tredegar.

PALMER, THOMAS WILLIAM GASCOIGNE, Cheltenham, dental surgeon. May 14, County Court Office, Cheltenham. May 19, County Court, Cheltenham.

ORDER ON APPLICATION TO APPROVE SCHEME.

DOBSON, GEORGE, Penarth and Cardiff, chemical manufacturer. Composition of 2s. 6d. in the pound. Receiving order rescinded.

RECEIVING ORDERS.

BROTHERS, WILLIAM, St. Anne's-on-the-Sea, formerly of Livesey Works, near Blackburn, out of business, formerly fire-clay manufacturer and chemical manufacturer.

COOPER, JOHN GREGORY, Chatteris, Cambridgeshire, veterinary surgeon.

ORCHARD, ARTHUR BISHOP CAREY, Ebbw Vale, Monmouthshire, chemist and druggist.

NOTICE OF DIVIDEND.

SEMPLE, CHARLES EDWARD ARMAND, Goldhawk Road, Shepherd's Bush, and Torrington Square, doctor of medicine. First and final dividend of 6½d. Any day except Saturday, Chief Official Receiver's Offices, 33 Carey Street, Lincoln's Inn.

BANKRUPTCY REPORTS.

Re **MATHEW BLOXAM**, 7 Dorset Square, Marylebone, Surgeon.

The first meeting of creditors under this failure was held on May 5, before Mr. Wreford, assistant receiver. The receiving order was made on April 2, and the statement of affairs since filed shows liabilities 225*l.* 4*s.* 4*d.*, and assets 109*l.* 15*s.* 11*d.* The debtor states that he has been in business for the last twenty-five years, and he attributes his failure to the falling off of his practice. There was no offer, and the debtor having been adjudged bankrupt, the official receiver will wind up the estate. Annexed is a list of creditors:—

	£	s.	d.
Berryman, Dorset Square	31	0	0
Goldsworthy, Dorset Square	12	0	0
Head & Co., Upper Baker Street ..	23	4	0
Hollis & Co., Dorset Square	35	0	0
Miss Hunter, Upper Gloucester Place ..	11	5	0
T. Q. Parkinson, Cheltenham	37	0	0
C. B. Vining, St. John's Park, N. ..	14	0	0
Rev. L. M. d'Orsey, Twickenham ..	10	0	0

On Wednesday, May 11, a meeting was held before Mr. Registrar Giffard for the public examination of this debtor. In the absence of opposition, the learned Registrar directed the public examination to be concluded.

Pharmaceutical Society of Great Britain.

NORTH BRITISH BRANCH.

An evening meeting was held in Edinburgh on Wednesday, Mr. H. Bellyse Baildon in the chair. The minutes were read and approved of.

The first paper read was on

AN ACCURATE METHOD FOR DETERMINING SPECIFIC ROTATORY POWER.

By W. Peddie, B.Sc., F.R.S.E.

Nicol's prisms are used as polariser and analyser. Between these prisms a mirror is placed so as to shut off half the light passing through the instrument. Light is reflected through the analysing prism from this mirror. Sun-light is used in all cases preferably. The Nicol's prisms are arranged so as to shut out all the direct light, and then the substance to be examined is placed between them. The emergent light is now examined by means of a direct-vision spectroscope. The direct light gives a spectrum crossed by dark bands, while the reflected light gives a spectrum in juxtaposition with the former (the Fraunhofer lines in one being in direct continuation of those in the other), but uncrossed by dark bands. The centre of each dark band corresponds to a rotation of some multiple of 180° . To determine the rotation for any particular kind of light—say the light given out by incandescent sodium vapour—the analysing prism is turned round until the dark band which is nearest the sodium line, but in the less refrangible portion of the spectrum, moves along so that its centre coincides with the sodium line in the spectrum which has no dark bands. The rotation registered gives the excess of rotation for the sodium line over some multiple of 180° .

The author gave a formula for calculating the extent of the rotation, and stated that the method is greatly superior in point of accuracy to any of the ordinary "neutral-tint" methods, and has the additional advantage of giving the rotation for any particular wave-length.

The CHAIRMAN moved a vote of thanks to Mr. Peddie. Dr. INGLIS CLARK seconded the motion, and expressed his admiration of the care with which Mr. Peddie had worked out his method. Mr. D. B. DOTT then read a

NOTE ON SOLUBILITIES.

This paper had reference to the solubility of certain compounds, regarding which books of reference give very different factors. He had made new determinations with results for which he did not claim a high standard, but the figures given were sufficiently near the truth for all practical purposes. The method employed consisted in digesting an excess of the substance in the solvent, and filtering at the observed temperature. The following are the results:—

Morphine hydrochloride, 1 part soluble in 16 parts rectified spirit at 16° C.

Salicin, 1 part soluble in 66 parts rectified spirit at 16° C.

Gallic acid, 1 part soluble in 118 parts of water at 16° C.

The same author contributed a preliminary note on the purification of fixed oils. He stated that the process was not thoroughly worked out, but, so far, it had in his hands given satisfactory results. It consists of shaking the oil with a twentieth of its volume of a 10-per-cent. solution of permanganate of potash and some dilute sulphuric acid, allowing the aqueous portion to settle, and filtering the oil. Olive oil and almond oil were found to be much improved in appearance, and showed no sign of deterioration, but linseed oil did not give so good results. In these experiments he was assisted by Mr. J. R. Hill, whom he thanked.

Dr. INGLIS CLARK asked if the oil was improved in any way but appearance, but to this the author could give no reply.

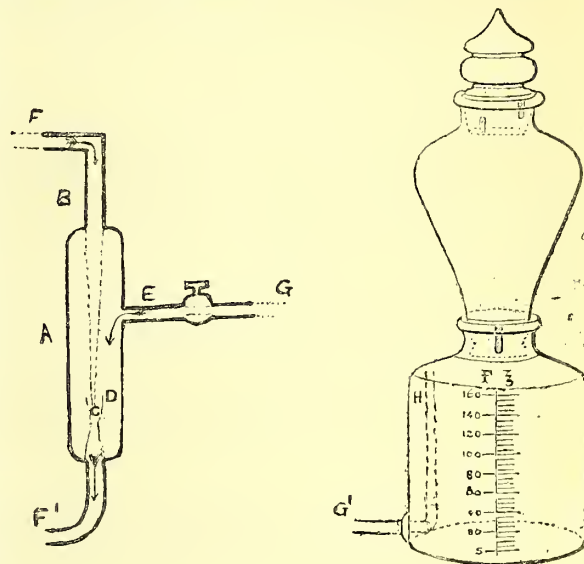
The next paper read was on

A SIMPLE METHOD FOR PERCOLATION UNDER PRESSURE.

By Thomas Maben.

In this paper the author shows how a vacuum-pump may be adapted to a percolator. The construction of the pump is shown in the accompanying drawing.

The pump is made of brass throughout. A is a tube about $3\frac{1}{2}$ inches long by three-quarters of an inch in diameter, into which is soldered a small tube, B. This tube is gradually narrowed to the orifice C, which is inserted about half an inch into the outlet-tube D, which, in its turn, is also soldered to A. D is preferably constricted about an inch below C. A connection having been made by means of indiarubber tubing between the main hydrant and F, the water is forced through C, and in passing down the outlet-tube it naturally creates a vacuum, and A is rapidly exhausted, the air being drawn through the annular space at D. The inlet-tube, E G, is provided with a stopcock, and when this is opened the air rushes into A continuously.



The percolator used may be one of the York Glass Company's with the tap removed. In place of it the tube G' H is inserted through a perforated cork. The end G' of this tube is connected with the end G of the pump by means of an indiarubber tube with wire coil inside. At G' there is inserted a small ball-valve, which allows the air to pass in the direction of E, but does not allow water to flow into the receiver if the tendency to that should happen. In using the apparatus the water current must be turned off if at any time the stream is to be lessened in volume, the stopcock at E should first be closed and reopened cautiously. E must be closed first before the water is turned off finally.

The efficiency of the pump has been tested by means of a vacuum gauge fixed at E, and it has been found that the degree of exhaustion is equivalent to about two atmospheres.

Dr. INGLIS CLARK, in moving a vote of thanks to Mr. Maben, said that he could not understand how a pressure of two atmospheres could be obtained; he thought about a half would be the most that it would be capable of producing. A simple way of percolating under pressure was to have a long tube from the bottom of the percolator. This gave as good and as constant results as when an air-pump was used, and with less trouble. He thought the mechanism could be used for other purposes in pharmacy, and Mr. Maben had done well in bringing it under their notice.

The last paper read was on—

IRISH MOSS AS A SUBSTITUTE FOR GUM ACACIA IN PHARMACY.

By Peter Boa.

After some preliminary remarks on the composition of Irish moss, and on the difficulty of obtaining a clear mucilage, the author stated that he found that by using a hot-water funnel and straining the mucilage through absorbent cotton-wool supported on muslin, a preparation clear enough for all but exceptional purposes could be obtained with comparatively little difficulty. If a perfectly water-clear preparation be required, it may be obtained by making a weak mucilage, filtering it clear, and then evaporating to the required consistency. The mucilage is prepared by digesting

½ oz. of washed moss in 24 oz. of water for an hour, boiling for five minutes, and straining the moss mucilage. It serves as well as acacia for chalk mixture; gualac mixture prepared with it has not so green a colour as that made with acacia. For suspending copaiba it is superior to acacia. Separation takes place much more slowly and less completely. Part of the copaiba remains in an emulsified state at the bottom of the bottle when moss is used, but with acacia the whole rises to the top. For emulsifying cod-liver oil it is greatly superior to acacia for preventing separation, but finer division of the oil is obtained with acacia. Moss mucilage 5vj., cod-liver oil 3j., and water 5ij., produce an emulsion that does not readily separate. Using 5vj. acacia mucilage, 3j. cod-liver oil, and 5ij. water, the resulting emulsion soon separates. It is *not* adapted for suspending heavy powders such as bismuth subnitrate. The mucilage keeps well in full bottles.

Mr. NESBIT remarked that a substitute for gum acacia was much wanted. He was struck with the power of Irish moss in emulsifying cod-liver oil. He thought that the preserving properties of the moss were worth more investigation, and that further experiments might be made on its adaptability for suspending powders. Saccharated carbonate of iron would not, he thought, behave like subnitrate of bismuth.

Mr. J. B. STEPHENSON also commented upon the paper, and stated that he had previously been struck with the strength of moss mucilage. He reminded the meeting that there were some medical men who objected to any suspending agent in mixtures, and even ordered chalk mixture without gum.

Mr. THOMPSON, commenting upon the specimens, said that he had obtained better results with gum acacia as an emulsifying agent for cod-liver oil than were shown by the specimens exhibited.

Mr. BOA briefly replied, and then made some remarks on the sugars used for syrups. He found that he only got bad results when cheap sugars were used. Specimens of syrups and sugars were shown.

The CHAIRMAN then said that this was the last meeting of the session. He was pleased that the attendance had been so good throughout, and that the session was so successful. It had been short but lively.

Mr. NESBIT, in moving a vote of thanks to the Chairman, said that much of the success of the session was due to his presence and influence. (Applause.)

The meeting then adjourned.

Trade Notes.

THE Admiralty have accepted the tender of Mr. A. de St. Dalmas, of Leicester, for the supply of spread plasters.

INGRAM & ROYLE.—Mr. H. W. Royle, formerly the proprietor of this business, has resumed the active management since May 9.

SODA-WATER PLANT.—In Messrs. Bratby & Hinchliffe's page will be found descriptions of a number of second-hand machines they have in stock, together with advertisements of their own specialties.

MESSRS. CRAWSHAW & Co. have printed selections from the competition poems respecting Crawshaw's dyes, obtained by advertising in this journal, in a small pamphlet. The collection is very amusing.

NICKELS FUNNEL.—A description of this will be found in the report of the meeting of the Society of Chemical Industry on another page. We find the funnel to be excellently adapted for the various purposes described by the inventor, whose address is 104 Leadenhall Street, E.C.

MR. PAUL METZ, of 10 Jewin Street, E.C., is introducing some santonine cones as worm tablets, which are well made, do not readily crumble, and are pleasant to take. The tablets as made now contain in each 1 grain of santonin, but Mr. Metz says he shall get the manufacturer to make them with 3 grains of santonin in each.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on May 4 at the Society's rooms, No. 4 Harcourt Street, Dublin, at 3 P.M., the President, Mr. William Allen, in the chair.

The other members of the Council present were Messrs. Bruncker, Hodgson (Treasurer), Pring, Grindley, Wells, Ray, Dr. Evans, Professor Tichborne, Simpson, and Dr. Collins.

The first business on the paper was the adjourned discussion on the following motion, which had been proposed by Mr. Bruncker and seconded by Mr. Wells at the last Council:—

That the regulations laid down for attendance on a course of practical chemistry be amended as follows:—For the words "been present at at least three-fourths of the working days of said course," read "actually worked at the bench for one hundred hours during said course."

Some discussion first took place respecting the teaching of chemistry in Belfast, in the course of which Mr. Wells said the real question was, Could a young man learn his chemistry in the time now prescribed? If not, let him spend six months at it if necessary. He had found from the examination papers that the young men from Belfast were well up in chemistry. That could not be said with respect to young men from other parts of the country. In two years eleven men came up from Belfast, and every one of them passed in chemistry, while only about half of the men with Dublin addresses passed in that subject during the same time.

Professor TICHBORNE said Mr. Bruncker had stated that under the present regulation it was possible for a young man to obtain a certificate after twenty-seven hours' work. If so, it was desirable to define a different time; but it was a serious thing to spring from a minimum of twenty-seven hours to one hundred hours. A very undesirable result of such a change would be to impose greater expense and difficulty on students, and oblige them to spend a longer time in the large towns where they would have to study, and make them gravitate more towards Dublin than they should. The object of the Society's Act of Parliament, as appeared by its preamble, was to increase the number of persons qualified to compound prescriptions throughout the country, though not to undertake other functions of the apothecary. There were at present 300 licentiates on the register of the Society. Of these 98 were in Dublin, 38 in Belfast, and 11 in Cork. Deducting all these from the 300 there remained 153. A great many qualified men became assistants, or took other appointments. Taking the second page of the register at random, he found that of the 39 names in it only 14 kept open shops of their own; and on the whole he found that, leaving out the men settled in Dublin, Belfast, and Cork, there remained only 60 men for the 1,920 post towns in Ireland, which gave the proportion of one qualified man to every 32 post towns. Therefore it was not desirable that they should increase the time to be spent at chemistry too much. He believed that at present Dublin was overdone. Again, the examinations were not paying. At the last examination the Preliminary produced about 12%, and that for the licence about 15%. That would not pay their working expenses.

PRESIDENT: It would be objectionable to allow any pecuniary considerations to weigh with us.

Professor TICHBORNE: I only allude to the matter incidentally.

Dr. COLLINS was in favour of some number of hours intermediate between one hundred and the present requirement.

Mr. SIMPSON said he agreed to a great extent with Prof. Tichborne. If a young man attended a course of twelve weeks for three nights each week at two hours a night, that would be seventy-two hours; and if he could not in that time learn as much chemistry as the Society required his previous education would have been very defective. He (Mr. Simpson) thought seventy hours would be long enough.

Mr. HODGSON expressed similar views.

Mr. SIMPSON: We should not deter young men from coming to our business. We shall find it difficult to get them if we make the time too long.

Mr. WELLS: I think the men coming to it are quite enough. We are overrun with chemists.

Professor TICHBORNE: Perhaps so, in Dublin.

Mr. WELLS: You won't get a man to go to a country town

where he cannot get a living. How many of the post towns alluded to would support a chemist?

Mr. BRUNKER, in reply, said when he brought this motion forward at the last meeting he said he was not committed to one hundred hours. He was now, because he had not since heard a single good argument against that number. All the arguments they had heard were based on the convenience of candidates or the convenience of teachers, the latter being regarded as the most important. At the time he voted for the existing regulation he was under the impression that the student would work at practical chemistry on at least five days in the week. Now it appeared that he only worked on three days. He (Mr. Brunker) would not confine the course to three months. If the student could not put in his hundred hours in three months let him take five or six to it. When the hundred hours were decided upon the schools would arrange their days and hours accordingly. He had felt bound to bring this resolution forward in consequence of what the visitor of the Privy Council had reported as to the cramming of candidates. The Council could not control men once they were licensed; but he believed that a great many young men were acting foolishly in settling down in towns instead of seizing upon good openings in the country. The facts mentioned as to the pecuniary results of the examinations were really in his favour, because in consequence of young men not being able to pass at once, they were examined twice for the same fee. If they knew their business they would pass at the least expense to themselves and the Society. A change to one hundred hours would not be so great a jump as was represented, because the certificate on twenty-seven hours' work was only an extreme case, and he believed that the majority of young men under the present regulation put in from fifty to sixty hours.

Mr. RAY: Will this Society be the only one to fix one hundred hours?

Mr. BRUNKER: The English Society are trying heaven and earth to get powers to do what we have been doing for some years. Their requirements will be greater than ours because their students will have to put in courses of materia medica and botany.

Professor TICHBORNE moved an amendment that the time to be spent at the chemical bench be fixed at seventy-five hours.

Mr. SIMPSON seconded the amendment.

On a show of hands, there were 5 for and 5 against the amendment.

The President gave a casting vote against it.

The original motion of Mr. Brunker was then put and carried.

Mr. BRUNKER moved that all certificates issued after July 1, 1887, shall be subject to the amended regulation.

Dr. EVANS seconded the motion, which was unanimously agreed to.

A letter was received from Mr. Alfred Bride, L.P.S.I., asking for a duplicate licence in place of the one issued to him, which had been accidentally burned. He mentioned that the licence was absolutely necessary to him as he was going to Australia.

THE PRESIDENT: We cannot issue a second licence, but the Registrar can give him a letter stating that he is a licentiate, and that his licence was lost.

Dr. EVANS: And stamped with the stamp of the Society?

THE PRESIDENT: That can be done.

On the motion of Dr. Evans, seconded by Mr. Hodgson, it was ordered that a stamped letter be issued to Mr. Bride on payment of a fee of 10s. 6d.

A letter was received from Messrs. Wills & Wootton, of the Westminster College of Chemistry and Pharmacy, asking that that college might be placed on the list of those recognised by the Society. A number of high testimonials were enclosed.

Mr. BRUNKER: The only reply that can be given to that letter is that we shall not be in a position to increase our list of recognised schools until the amended regulation as to the study of practical chemistry which has been passed to-day has been approved of by the Privy Council.

On the motion of the PRESIDENT, seconded by Mr. GRINDLEY, Mr. Henry Boyers, of 1 Rathmines Terrace, county of Dublin, was elected a member.

Some financial business having been disposed of, the Council adjourned.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

TUNISIAN PHOSPHATE OF LIME.—Considerable deposits of fossil phosphate of lime have been discovered in Tunis. So M. Gaudry reported to the Academy of Sciences, on the faith of a communication sent by M. Philippe Thomas.

THE RÉUNION CINCHONAS.—According to an enthusiastic Bordeaux paper, the cinchonas grown in the French island of "La Réunion," near Madagascar, are likely at last to yield their first appreciable crop of bark. No estimates of the probable yield are given, but it does not seem to be likely to materially affect the price of quinine.

A STATUE TO BROCA, the celebrated surgeon and physician, is to be erected some time during next August. The place chosen is on the Boulevard St. Germain, near the corner of the Rue de l'Ecole de Médecine. The statue is now exhibited at the Salon. It is the work of a deaf and dumb sculptor, M. Chopin.

M. GEORGE QUESNEVILLE has been appointed lecturer (*chargé de cours*) on mineralogy and hydrology at the Paris College of Pharmacy. The new professor is a son of Dr. Quesneville, of the *Revue Scientifique*. He is a pharmacist of the first class, a doctor of medicine, a doctor of science, and a fellow (*agrégé*) of the Faculty.

THE ROUEN SCHOOL OF MEDICINE AND PHARMACY.—Professor Duménil has been appointed director of the school, to succeed the late Professor Leudet. Professor Leudet, whose election to the Academy of Medicine was recently noticed in THE CHEMIST AND DRUGGIST, died barely fifteen days after he had been selected for academical honours.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.—The sixth congress will be held on September 26, 1887, in Vienna, Austria, and is expected to last until October 2. General hygiene, sanitary police, demography, and medical statistics will be the subjects discussed. The *Annales d'Hygiène* will publish the proceedings of the Congress.

THE ALTERATION OF VULCANISED RUBBER, according to Pharmacist-Major Balland, is owing to the formation of sulphuric acid resulting from the slow oxidation of the sulphur employed for vulcanisation. To prevent the destructive change, he recommends a simple washing of the objects with plain water or water slightly alkaline, repeated every two or three months.

EXEMPTED FROM INSCRIPTION FEES.—According to ministerial decision, the Faculty of the Paris College of Pharmacy have selected fifty-two students who will be dispensed from paying for the third and fourth inscription of the current college session. Their names were posted the other day on the official bulletin board. The fees in question amount to 60f. for each student.

AN IMPORTANT PHARMACEUTICAL MEETING.—The annual meeting of the "Association générale des Pharmaciens de France" will be held on June 2 at the Paris College of Pharmacy. Director Planchon has granted them for the purpose the use of the "Salle des Etats," a fine hall, where the Paris Pharmaceutical Society have their monthly meetings. The General Association is a scientific and also a benevolent society. Their ordinary fund amounts to 7,573f. in cash, and an income of 500f. in Government bonds. The life annuity fund consists of 3,031f. cash, and 146 railway bonds, worth about 52,000f.

NAPHTHALENE MAY CAUSE CATARACT.—Some time since Dr. Bouchard announced that he had caused rabbits to be affected with cataract by the daily administration of 1 gramme of naphthalene. Dr. Dor (of Lyons) and Dr. Panas (of Paris) have confirmed Dr. Bouchard's experiments before the ophthalmological congress now sitting here. They are far from concluding therefrom that naphthalene would affect man in the same manner, but they think great caution and constant watching necessary during its exhibition, until more is known respecting its action upon the human eye.

SISTERS OF CHARITY FINED FOR PRACTISING PHARMACY.—At Bruay (Pas-de-Calais) the company working the coal

mines established a sort of family pharmacy intended to supply the men with medicines, and placed two Sisters in charge. But they attempted soon to supply outsiders also, and thereby made themselves liable to a civil action, besides the statutory penalties. As a consequence, the Sisters were, on March 30, sentenced each to a fine of 25f. for illegally practising pharmacy, and to 500f. damages in favour of the village pharmacist, who had appeared as complainant. The Court ordered, besides, the pharmacy to be closed. The company will appeal from the decision.

ACETYLENE NOT POISONOUS.—In a report made to the French Medico-legal Society (Société de Médecine légale de France), Dr. J. Ogier has come to the conclusion that acetylene is not poisonous in itself. The gas is formed in notable quantities during the incomplete combustion of most hydrocarbons—ordinary gas, for instance. Professor Berthelot is inclined to attribute the accidents already observed solely to the carbonic oxide which is produced at the same time. Dr. Ogier's experiments have confirmed the opinion, for he finds that acetylene is but slowly soluble in the blood, forms no combination with hemoglobin as carbonic oxide does, and is no more poisonous than other gaseous hydrocarbons, such as formene, propylene, &c.

DEATH OF PROFESSOR GOSSELIN.—Athanase-Léon Gosselin was born in Paris in 1815. He graduated there as doctor of medicine in 1843, and filled several important posts, such as those of head or consulting surgeon of the Lourcine, Cochin, Beaujon, Pitié, and Charité hospitals. He was also much appreciated as a professor at the Faculty of Medicine. In 1860 he was elected to the Academy of Medicine, and in 1874 to the Academy of Sciences, in the place of Nélaton. As a token of mourning, the Monday meeting of the Academy of Sciences adjourned after an allocution by the Vice-President. On Tuesday similar action was taken by the Academy of Medicine, while the Faculty was closed on the occasion of the Professor's funeral.

THE PALAIS DES SOCIÉTÉS SAVANTES.—The Union of Paris scientific societies have purchased the building spoken of in THE CHEMIST AND DRUGGIST of February 5, page 167. It is a very large and fine piece of property, apparently the former mansion of some nobleman, situated at No. 14 Rue des Poitevins, one of those extraordinary crooked streets only to be found in what is left of old Paris. But once you have passed the *porte-cochère* you find yourself in a spacious court surrounded on four sides by the dwelling proper. Masons are now at work altering the building to its intended uses, and, as the light is very good and the structure lofty and substantial, Paris scientists will have there a comfortable home for their meetings, and a convenient place for their books, records, and collections.

Personalities.

At Monday's meeting of the Royal Institution of Great Britain, Dr. Tyndall was elected Honorary Professor of Natural Philosophy, and Lord Raleigh was elected Professor of Natural Philosophy.

THE WILL OF MR. ABEL PEYTON.—The personalty has been declared at 49,995*l.* of Mr. Abel Peyton, late of Edgbaston, who died on March 17. The testator bequeaths various sums to charities, an annuity of 2,000*l.* to his wife, and to his son Richard all his interest in the partnership business of manufacturing chemists carried on by them at Gosta Green, and in the frechold premises there, such interest for the purposes of account to be valued at 5,000*l.*, and the option of purchase of his house, Oakhurst, subject to his said wife's life interest at 3,000*l.*; and he bequeaths to his son-in-law, Colonel Phelps, and Mrs. Phelps 500*l.* in trust for the benefit of their daughter Malet. The residue of his estate he leaves in trust in equal shares for his daughters, Mrs. Elizabeth Francis Chance, Mrs. Augusta Fortune Ingram, and Mrs. Caroline Ann Phelps, and for his son, Mr. Henry Peyton, the trustees having liberty to deal at their discretion with a sum of about 16,200*l.* secured upon the Bordesley works.

Legal Reports.

THE HOP BITTERS COMPANY v. GRIFFITHS.—On Friday, May 6, Mr. Theodore Aston, Q.C., representing the plaintiff company, informed Mr. Justice Stirling, sitting in the Chancery Division of the High Court of Justice, that the defendant in this action had submitted to a perpetual injunction against him in the terms of the notice of motion. The defendant Griffiths is a chemist carrying on business at 256 Seven Sisters Road, Holloway. The notice of motion is as follows:—"To restrain the defendant from selling or offering for sale any preparation or compound under the name of hop bitters, tonic bitters, compound tonic bitters, or any similar title, contained in bottles and having attached thereto labels similar to or only colourably differing from the bottles and labels of the plaintiffs, or so contrived or prepared as to represent or lead to the belief that the preparation or compound sold by the defendant is of the plaintiffs' manufacture." Mr. Vaughan Williams was, he understood, instructed to appear for the defendant, and consent to an order being made in these terms.

His Lordship (to Mr. Vaughan Williams, who had just entered the court): Are you willing to submit to a perpetual injunction?

Mr. Vaughan Williams: In the terms of the notice of motion; yes, my lord.

His Lordship then made the order.

BECK v. HOP BITTERS COMPANY (LIMITED).—The examination of witnesses in chambers in this case has not yet been concluded. The counsel appearing on behalf of Mr. Beck is Mr. Richard Nevill, not Mr. Vaughan Williams, as was erroneously stated last week.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BERTIE SMITH—HEMSON.—On November 8, 1886, at St. Paul's Church, Poona, India, by the Rev. W. Clark, M.A., Chaplain, Albert Edward Bertie-Smith, chemist, eldest son of Mr. John F. Smith, Butler's Hall, Hawstead, Bury St. Edmunds, Suffolk, to Maria Arnott Hemson, only daughter of Mr. John Hemson, of Poona and Bombay.

HANSON—SHARP.—On April 28, at St. Peter's Church, Formby, by the Rev. Lonsdale Formby, Christopher Hanson, chemist, Cressington, Liverpool, late of Bingley, Yorkshire, to Florence Annie, eldest daughter of George W. Sharp, of The Grange, Freshfield, Lancashire.

DEATHS.

BEST.—On April 23, Mr. John William Best, pharmaceutical chemist, Darlington. Aged 32.

EKINS.—On April 22, Mr. William Ekins, pharmaceutical chemist, Huntingdon. Aged 62.

HILLS.—On April 11, Mr. Henry William Hills, chemist and druggist, Leyton. Aged 54.

LAMACRAFT.—On May 1, at her residence, 34 High Street, Putney, Sophia, relict of the late William Lamacraft, chemist. Aged 69.

ROCKE.—An announcement by cable has been received from Melbourne at the London office of Messrs. Rocke, Tompsett & Co., wholesale druggists, Melbourne, stating that Mr. Herbert Rocke died suddenly on the 11th inst. Mr. Rocke had been nearly a year in London, and left early in March, travelling to Melbourne *via* the United States. He wrote from San Francisco on April 9, just before sailing, stating that he was then in good health and had much enjoyed his journey through America. Mr. Rocke leaves a widow and five children.

MESSRS. J. & J. M. DE LOS SANTOS have established an import and commission business under the style of "Santos Hermanos," principally in the drug trade, at 329 Calle Alsina, Buenos Ayres.

Practical Notes and Formulae.

PRESERVING SALTS.

PAUL WEFERLINGEN, in *Phar. Ztg.*, recommends the following for preserving fish or butcher's meat during warm weather:—(1) Common salt, 8 parts; nitrate of potash and salicylic acid, of each 1 part; (2) boracic acid, 30 parts, nitrate of potash and common salt, of each 35 parts. A preserving powder for tinned fruits is composed of salicylic acid, 5 parts; and powdered sugar, 95 parts. This is sprinkled over the surface, and may also be used for sprinkling over fresh fruit, such as strawberries, which have to be kept overnight.

"MARY STUART" PERFUME.

A CORRESPONDENT of the *Druggist's Circular* says that a fair imitation of this perfume may be made as follows:—

Oil of bergamot	2 fl. oz.
Extract of rose	16 "
" " jasmim	6 fl. oz.
" " musk (1 dr. to 16 oz.) ..	4 "
" " ambergris (1 dr. to 16 oz.) ..	2 "
" " vanilla (6 dr. to 16 oz.) ..	4 "
" " orris (1 in 2)	8 "
Deodorised alcohol	64 "

USES OF COTTON-SEED OIL.

IN a note on this subject Dr. C. S. May says that its disinclination to deterioration or change makes it of the highest use in almost all of the ointments, and, in his experience, used for these or simple ointment, with proper admixture of cera alba and cetaceum, there results a better-keeping, more satisfactorily absorbed, and elegant pharmaceutical preparation. For some time he has been in the habit of using the better forms of vegetable fixed oils instead of cod-liver oil with equal results, and with much more ease and comfort in their administration for the patient. They are cleaner, sweeter, and less prone to deteriorate than any of the animal oils, and as is well known, their chemical composition and behaviour is not markedly different.

DETANNATION OF WINES.

The *Formulary* recommends the following method for removing the tannin or astringent matter from sherry wine:—

Sherry	7 pints
White of egg	1 fl. oz.
Alcohol	1 pint

Beat the white of egg to a froth, and mix it with wine; heat to about 170° Fahr., or until the albumen is coagulated. Then cool, add the alcohol, and, after standing a few hours, filter clear through paper.

This wine is a much better menstruum and preservative medium for organic substances than sherry itself.

GREEN COLOURING FOR TINCTURES.

IN a note on tincture of arnica Mr. Adolf Vomaacka states that on the Continent the tincture is preferred of a green colour. To impart this to it digest 1 part of fresh grass or spinach in 30 parts of the tincture, to which a little carbonate of soda has been added. In a short time the tincture acquires a beautiful green colour. Chlorophyll may be prepared by boiling grass or spinach in water for a short time and beating into a pulp. Drain the water off this, and digest in soda solution (0.5 per cent.) for several days; then boil, strain, and precipitate the colouring-matter with weak hydrochloric acid. Collect it on a filtering-paper, dry, and preserve in a well-closed bottle.

SOAP TEST.

SOAP may be tested in the following simple manner:—Place 15 grains of the powdered soap in a test-tube with 4 drachms of rectified spirit to which 15 per cent. of acetic acid has been added, and boil until a solution is formed. If the soap is pure the solution will be clear, but if strongly alkaline effervescence will ensue, the solution will not be clear, and a deposit will settle on standing. The supernatant fluid is a solution of the fatty acid in spirit, and the fatty acid may be thrown out of solution by the addition of 2 parts of water.

METAL-POLISHING SOAP.

AN excellent soap may be made by mixing together 69 parts of kieselguhr and 30 parts of soft soap, colouring the mixture with 1 part of armenian bole. The powders should be finely levigated before mixing.

COD-LIVER OIL EMULSION.

MR. A. TSCHEPPE recommends the following formula (*Pharmaceutical Record*) for the preparation of a permanent and palatable emulsion:—

Irish moss	1 drachm
Make a decoction in water-bath, strained ..	5 fl. oz.

Add—

Glycerin	2 fl. oz.
Alcohol	1 "
Oil of bitter almonds	5 drops
Oil of wintergreen	3 "

Mix. When cold, add—

Cod-liver oil	8 fl. oz.
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In three portions, shaking vigorously after each addition.

The emulsion is the more perfect the more it is shaken. If salts, such as hypophosphites, should be added, they must be dissolved in the decoction of Irish moss, or this may be made more concentrated, to give room for solution of the salts. Unlike the acacia emulsion, this emulsion can never be spoiled. The emulsification must be done with the cold decoction, and it acts even better if it stands twelve hours after straining.

CHERRY-WOOD STAIN.

	Grains
Alkanet root	15
Aloes	30
Dragonsblood, powdered	30
Methylated spirit	500

Mix, and let stand in a tightly-corked bottle some days.

The wood is first painted with dilute nitric acid (1 in 10), then with the stain. If too dark dilute with methylated spirit.

BRONZE PAINT FOR BUSTS.

BOIL 3 lbs. pure linseed oil with 12 oz. finely-powdered litharge; strain through a coarse canvas cloth, and allow to stand until clear. 15 oz. of this soap varnish mixed with 12 oz. metallic soap powder (made as follows:—To a solution of soda soap in linseed oil, cleared by straining, add a mixture of 4 pints sulphate of copper solution and 1 pint sulphate of iron solution, which precipitates a metallic soap of a peculiar bronze hue; wash with cold water, strain, and dry to powder) and 5 oz. fine white wax are to be melted together at a gentle heat in a porcelain basin by means of a water-bath, and allowed to remain for a time in a melted state to expel any moisture that it may contain. It is then applied with a brush to the surface of the plaster, previously heated to 200° Fahr., being careful to lay it on smoothly, and without filling up any small indentations of the plaster design. Place it for a few days in a cool place, and, as soon as the smell of the soap varnish has gone off, rub the surface over with cotton wool or fine linen rag, and variegated with a few streaks of metal powder or shell gold. Small objects may be dipped in the melted mixture, and exposed to the heat of a fire till thoroughly penetrated and evenly coated with it.—*Scientific American*.

VETERINARY BALSAM.

A SOUTH GERMAN periodical recommends the following formula for a balsam for curing wounds in domestic animals: Elemi, 200 parts; Venice turpentine, tallow, and lard, of each 400 parts; cotton-seed oil, 100 parts; sandal wood (ground), 40 parts; and carbolic acid, 2 parts. M. s. a.

SEIGEL'S PILLS.

THE *Pharmaceutische Post* publishes the following formula for Seigel's Purging Pills:—

	Grains
Ext. rhei	45
" leptand. virg.	45
" euonymi	30
Pul. sennæ	30
" capsici	37½

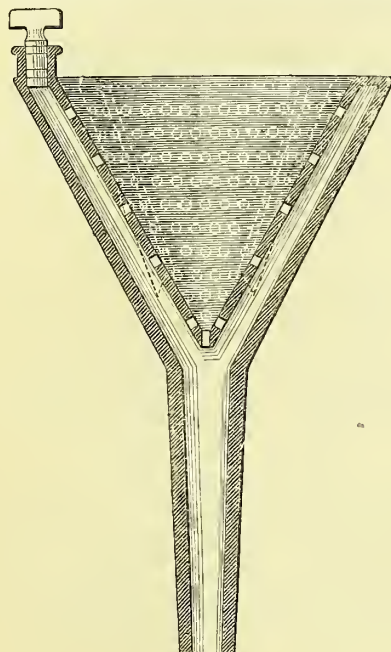
Mix and divide into 50 pills.

SOCIETY OF CHEMICAL INDUSTRY.

LONDON SECTION.

A MEETING was held on Monday night, Mr. David Howard, President of the Society, in the chair. There was a large attendance of members and visitors.

The SECRETARY (Mr. T. Tyrer) having read the minutes of the previous meeting, the President called upon Mr. W. C. Nickels to explain the construction and use of an *improved filtering funnel*, of which a number of specimens were exhibited. Reference was made to the funnel recently in our abstracts of patents and specifications. From the engraving it will be seen that it is a double funnel, and is made by the potter or glass-blower as a single piece. The inner part is a perforated cone, distinct from the outer part, except at the top, where it is continuous with it. There are two forms of the apparatus; in one the connection between the parts consists of a dozen or more bands of porcelain; in the other the interspace is covered except at one part, where



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there is provision for a cork or stopper, as shown in the engraving. The funnel may be said to have four advantages: (1) Ordinary filtration is greatly accelerated by it. (2) The stoppered funnel may be connected with a flask, which in its turn is connected with a vacuum pump and rarification proceeded with; in this case there is no risk of breaking the filtering medium. (3) In the filtration of volatile liquids the funnel (without stopper) has only to be covered with a sheet of rubber and a glass plate. The air in the receiver passes up between the inner and outer parts, through the holes of the inner, and replaces any liquid which has filtered. For this same reason there is no chance in ordinary filtration of filtrate being lost owing to air not getting out. (4) The funnel is suitable for dialysis. A piece of parchment is used like an ordinary filter, the liquid to be dialysed placed in it, the funnel then placed in a bottle of water, or a tapped tube connected with it, and the space between the two parts of the funnel filled with water. Dialysis is rapid, and there is great economy of water. The funnels may be made in glass, earthenware, or metal.

The CHAIRMAN described the invention as a very useful and ingenious one. He then called upon Dr. P. F. Frankland to read his paper on

RECENT BACTERIOLOGICAL RESEARCH IN CONNECTION WITH WATER SUPPLY.

After referring briefly to a previous paper on the subject communicated to the Society eighteen months ago, Dr.

Frankland stated that in that paper he showed clearly how the efficiency of filtration might be tested by other than chemical means. To living organisms he attributed the greater dangers of contaminated water, for although the presence of unorganised organic matter is a source of danger, that occurs chiefly, and to a dangerous extent only, in well waters, and not in the water supplied by the public companies of London and other large communities. Hence the importance of testing water as to its contamination with micro-organisms. In the previous paper he had given the results of filtration experiments on the laboratory scale, and in the present one were given the results of his monthly examinations of the London water supply. He first drew attention to a large table of figures upon the wall, in which were given the total number of colonies of microbes obtained by cultivation of 1 c.c. of the water by Koch's method. [This consists in mixing the infected fluid with a cultivating medium of gelatine-peptone under proper precautions, the number of colonies of microbes on a certain area of the glass plate being afterwards ascertained with the aid of the microscope.] The figures given were for each month of 1886, and for each London company. Thames unfiltered water gives, on the average, no less than 20,255 colonies, the number in January being 45,400; in April, 12,250; in July, 3,000 (*lowest*); and in December, 63,000 (*highest*). After filtration this water is supplied by the Chelsea company with the following microbe content:—January, 159; April, 94; July, 59; and December, 222; the average being 146. The figures for the Grand Junction are, January, 4,894; April, 115; July, 14; and December, 1,700; average, 630 (*highest*). The water of the Lea showed the same remarkable differences in microbe content during the dry and wet seasons. Thus, in the unfiltered state it contained, in May, 2,950, and in December, 121,000, while in these months the New River Company supplied the water with 22 (May) and 400 (December). The water of deep wells showed a marked contrast to these figures. Thus, for Kent the water from the well direct contained, in February, 5, but from the district, 149; in October, well direct, 82 (unusually high), and district, 344. Dr. Frankland explained why there are less micro-organisms present in the water in summer than in the winter. In winter the river is flooded and receives a large amount of drainage, but in summer it is mainly spring water. Bringing the figures to percentage reduction, we find that in the case of Chelsea, 98.6 per cent. of the organisms were removed by filtration, and in the case of the Grand Junction, 98.2 per cent., although in some months as much as 99.9 per cent. of the micro-organisms were removed by filtration. Biological analysis of the water supplied by the different companies shows that the difference observable is entirely due to the difference in the filtering material, and for this reason it is desirable that water-engineers should give their attention to this important subject. As showing the importance of the biological test, Dr. Frankland submitted the results of a chemical and biological examination of the water supply of a large town in the North of England. These results we subjoin. Sample 1 was collected on the river, twenty-seven miles above the intake; sample 2 (eleven miles lower) received sewage from several communities; sample 3, the unfiltered water at the intake; and sample 4, the water as supplied to the town:—

Samples		1	2	3	4
In 10,000 parts	Total residue	24.08	31.20	28.40	26.20
	Organic carbon .. ..	.108	.118	.123	.119
	" nitrogen .. ..	.020	.028	.025	.022
	Ammonia .. ..	.0	.0	.0	.0
	Nitrogen as nitrates and nitrites .. ..	.075	.123	.077	.089
	Total nitrogen .. ..	.095	.151	.102	.111
	Chlorine	1.1	1.6	1.6	1.6
Total hardness		18.3	20.0	18.6	18.0

Colonies of micro-organisms per 1 c.c.		1,810	33,400	31,200	122
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From this it is evident that chemical analysis gives practically no indication of the difference in the quality of the water, although the micro-organisms were widely different in each case. In spite of these striking and even alarming figures, Dr. Frankland wished it to be expressly understood that he drew from them no conclusion whatever as to the

excellence of the various waters, although he thought that the method of filtration which reduced the number of organisms to the greatest extent should be considered the best.

He then passed on to consider experiments on the filtration of water on the small scale; the work of Dr. Plagge, of the Hygienic Institute of Berlin, being especially referred to, who has demonstrated that filters with charcoal, stone and sand media increase rather than diminish the number of organisms. Spongy iron and paper filters decrease the number slightly, and earthenware and asbestos filters are highly efficient in removing the organisms. He then passed on to detail experiments with specific organisms, those employed being (1) Koch's comma spirillum of Asiatic cholera; (2) Finkler's comma spirillum; (3) The bacillus pyocaneus (or suppurative bacillus); (4) The micrococcus of erysipelas, and (5) the bacillus anthracis. The experiments with the first named of these showed that the bacilli live in London sewage for at least eleven months; but in filtered Thames water they become extinct on the ninth day, while with a much weaker cultivation a single day was sufficient for the annihilation of the organism. In the case of the second named it was found that it failed to prolong its existence in sewage or Thames water longer than a single day. The bacillus pyocaneus, on the other hand, multiplied in sewage, Thames water, and even distilled water. The anthrax bacillus was a marked contrast to all these; in distilled water it retained its vitality practically unimpaired after two months; it diminished somewhat in Great Junction water, but in sewage the organism increased enormously by the end of two months, although to begin with there was a falling off, due to the weaker ones dying out. The erysipelas bacillus became extinct within three days. Experiments with other organisms were detailed, all of which brought out more strongly the tenacity of the anthrax and Koch's comma bacilli under the conditions named. His experiments had proved that the bacillus of typhoid fever lived in water for from ten to fourteen days, and the spores of the same have a tenacity of life equal to those of anthrax. Discussing the influence of non-pathogenic forms over the pathogenic, he stated that the crowding out process had been greatly exaggerated, for although the pathogenic may increase to an enormous extent, the non-pathogenic do not necessarily decrease.

DISCUSSION.

The CHAIRMAN said that this research was one of very great importance. Like all new branches of knowledge, it was one of which we might be apt to make too much; but there was no doubt that it was much better to know of the existence of these organisms in drinking-water than not to know, for, as Dr. Frankland had shown, their removal was a matter which water-engineers could deal with effectually. The paper showed how greatly this branch of study had advanced, and how important it was to associate the biological test with the chemical.

Mr. BISCHOFF pointed out that the formidable array of figures was based entirely on the efficiency of Koch's gelatine-peptone test. He fully admitted that there was a great deal of fascination in that test, such as the nicety of the apparatus employed and the uniformity of the results; but the test had not been proved to be correct. Dr. Klein had proved that there were microphytes which did not grow in the cultivating medium, and that there were other factors influencing the result which Dr. Koch had not taken into account. The speaker, after animadverting severely on Dr. Frankland's knowledge of the whole subject, proceeded to criticise the results which he had brought before the meeting. He objected to his methods and to his conclusions, and asked him to explain how the water companies' filters acted—was it mechanically or antiseptically? If the former, he contended that the filter beds would retain micro-organisms, and would act as breeding beds just as the domestic filters would.

Mr. KINGZETT said that Dr. Frankland had made an assumption which was not quite free from danger, viz. drawing a hard and fast line between pathogenic and non-pathogenic organisms. Chemists were too apt to assume that microbes had only one mode of life; for it was well known that if they changed the conditions of growth and the medium in which the organisms grew the products of growth were also changed. Of this he gave examples. He thought that it was possible that the bacillus anthracis and bacillus

subtilis were the same. Nor could he admit that the erysipelas bacillus with which Dr. Frankland worked was the cause of that disease. In conclusion, he submitted that Dr. Frankland had not proved that the "colonies" which he spoke of were colonies of a specific organism. The contamination noted in the case of the anthrax cultivations seemed to bear out what he said.

A MEMBER referred to a sample of water which he had analysed that acquired a strong sulphuretted odour, which was traced to the action of a micro-organism on the sulphate of lime contained in the water.

Mr. JOHNSTON, referring to the influence of the rainy season on the number of micro-organisms in the water supply, suggested that another possible source of contamination was the decay of vegetable matter in the soil during the winter months.

Dr. FRANKLAND then made an effective reply to his critics, and thereafter a vote of thanks was accorded to him.

Owing to the lateness of the hour, the Chairman intimated that Dr. C. R. A. Wright's paper on the "Action of Zinc Chloride on Castor-oil" would be postponed until May 16, when there would be an extra meeting; at which also would be read a paper by Messrs. Cross and Bevan on "The Pickett Wood-pulp Process," and another, by Mr. John Ruffle, on "A New Method of Estimating Moisture in Superphosphates and similar Fertilisers."

The meeting then adjourned.

HERMITE'S ELECTROLYTIC PROCESS FOR THE MANUFACTURE OF BLEACHING LIQUOR.

A paper on this subject was read before the Liverpool section of the Society of Chemical Industry on May 4, by Ferdinand Hurter, Ph.D., Dr. Campbell-Brown in the chair.

The author criticised the paper on the same subject read by Messrs. Cross and Bevan before the London section in March last, and proved by numerous quantitative experiments that electricity was wasted in consequence of reactions taking place in the electrolytic tank, which seemed to have escaped the attention of Messrs. Cross and Bevan.

The outcome of the author's experiments was to show that as soon as the hypochlorite (the bleaching agent) was formed in the solution, part of the electric current was wasted by decomposing the hypochlorite itself, transforming it into chlorate (which is not a bleaching agent), and afterwards another portion of the current was spent in transforming the chlorate into perchlorate. A further loss of current was found to be consequent upon a secondary reaction, viz., the reduction of hypochlorite to chlorite by the nascent hydrogen gas, part of the work already done by the current being thus undone.

The author came to the conclusion that in consequence of the waste of electric current occasioned by these reactions, and which is unavoidable, the cost of producing a bleaching solution equivalent to a solution of ordinary bleaching-powder of about $\frac{1}{2}$ ° to 1° Twaddell would be 22*l.* to 42*l.* per ton of hypothetical bleaching-powder, and not 2*l.* 10*s.*, as calculated by Messrs. Cross and Bevan from their abnormal results.

FREEZING MIXTURE.—A liquid invented by Raoul Pictet, of Geneva, Switzerland, for use as a disinfectant, answers well as a freezing mixture for hardening microscope specimens. Sulphur dioxide and carbon dioxide, having been mixed and cooled, are compressed until they are liquid, and stored in siphons. When liberated, they rapidly evaporate with great reduction of temperature. By this means mercury may be frozen, and animal or vegetable tissues rendered solid in a few seconds. It is as easily managed as and more effective than ether, the odour being the principal objection.

PYROFUXIN is the name under which Professor P. Reinsch, of Erlangen, Bavaria, has introduced a new tanning material which is a product of coal—not coal tar. The coal or other suitable bituminous matter is boiled with a solution of caustic soda. This solution, after standing for some time, is charged with carbonic acid gas, and evaporated. Russian coal is stated to yield 19 per cent. of the material, and it is said to tan twenty-eight times quicker than bark. About a dozen discoveries like this are made annually, but shoe leather is as dear as ever.

THE NEW HONORARY MEMBERS OF THE PHARMACEUTICAL SOCIETY.

SIR HENRY WENTWORTH ACLAND, K.C.B., M.D., F.R.S., President of the Medical Council, Regius Professor of Medicine in the University of Oxford, Hon. Physician to H.R.H. the Prince of Wales; Hon. LL.D. Camb., Edin., Durh.; Hon. M.D. Trin. Coll., Dubl.; F.R.C.P. Lond. This veteran scientist was born in 1815, and was educated at Harrow and Christ Church, Oxford, where he graduated in arts. He continued at Oxford as a medical student, and was appointed Lee's Reader in Anatomy in 1845; while acting in this capacity he worked with others on the arrangement of the Christ Church physiological series, which is deposited in the Oxford University Museum. Sir Henry graduated as M.D. in 1848, and was appointed to the chair of medicine in



SIR HENRY ACLAND.

1858. He has filled the presidential chair of the British Medical Association, and was president of the physiological section of the British Association in 1865. He accompanied the Prince of Wales as his physician when he visited America, and also acted as physician to the Duke of Albany when he was studying at Oxford. Sir Henry has published various papers. His address to the pharmaceutical students of Bloomsbury Square last autumn was a happy effort which was greatly appreciated. We have already reported that he is to resign the presidency of the General Medical Council, which is in session this week.

Heinrich Anton de Bary, Professor of Botany, Strasburg University, M.D., Ph.D., Foreign Memb. Roy. Soc., &c. This



PROFESSOR DE BARY.

accomplished botanist is a native of Frankfort, where he was born early in the year 1831. He received his scientific education in the Berlin University. His name was first heard of in connection with botanical science by the publication,

in 1853, of "A Memoir on the Uredineæ and Ustilagineæ." From that time until now Dr. de Bary has published many papers and books, cryptogamus plants, especially fungi, receiving the largest share of his time and labour. Of his books, the first one on "Comparative Anatomy of the Vegetable Organs of Vascular Plants," which was the result of twelve years' labour, was published in 1877, and is considered a work of great value. Dr. de Bary is Director of the Botanic Gardens of Strasburg, and since 1867 has edited the *Bo'anische Zeitung*.

Joseph Bosisto, C.M.G., M.L.A. (Victoria), J.P., past president of the Pharmaceutical Society of Victoria. Mr. Bosisto, who was born in Yorkshire, went to Australia in



JOSEPH BOSISTO.

early life, and became one of the most eminent and successful of Victorian pharmacists. He has been for many years a member of the Victorian legislature, and in that capacity initiated the pharmaceutical legislation which is now general in the Australasian colonies. After many years of persistent effort, Mr. Bosisto succeeded in introducing into commerce the Australian eucalyptus oils, and with the manufacture of these his name has been closely associated. Last year he represented his colony at the Indian and Colonial Exhibition in London, he being the president of the Victorian Commission. His indefatigable services in that position were not too lavishly rewarded by the bestowal of a Companionship of the Order of St. Michael and St. George.

Christian Brunnengraber, Ph D., President of the Deutscher Apotheker-Verein, Rostock. Dr. Brunnengraber is a repre-



DR. BRUNNENGRÄBER.

sentative German apotheker, who has for some years presided over the association of German pharmacists with an almost autocratic rule. He is an effective speaker and is very popular.

Thomas Lauder Brunton, M.D., D.Sc., F.R.C.P. Lond., F.R.S., was born in Roxburghshire in 1844, and was educated at the Edinburgh University, where he graduated in medicine and science. He afterwards studied in Continental schools, and, settling down in London, was in 1870 appointed lecturer in materia medica and therapeutics at the Middlesex Hospital. Dr. Brunton's work as an investigator and author may be said to have begun in his student days. His thesis for his medical degree was on Digitalis, and was awarded a gold medal. Nearly all his investigations have had a close relation to the heart's action and to the condition of the blood



DR. T. LAUDER BRUNTON.

and its constituents. He has been associated with Burdon Saunderson, Fayrer, and other eminent men in investigating obscure physiological problems. His latest research has been on the connection between chemical constitution and physiological action, as the result of which a series of papers have been presented to the Royal Society, and his address to the pharmacological section of the British Medical Association at Brighton was on this subject. Dr. Brunton is editor of the

Practitioner, and has written a text-book of pharmacology and therapeutics which has met with remarkable success.

Mr. Wm. Turner Thiselton Dyer, C.M.G., F.R.S., M.A. Oxon. B.Sc. Lond., F.L.S., Fell. Univ. Lond., Hon. Fell. K.C.L., Director of the Royal Gardens, Kew, succeeded Sir Joseph Hooker in the last-named position on the retirement of the latter in 1885. He was the son of a physician in Mayfair, and was born in 1843. He was educated at King's College School, and afterwards at Oxford. In 1868 he was appointed Professor of Natural History in the Agricultural College, Cirencester, and in 1870 Professor of Botany in the Royal



W. T. THISELTON DYER.

College of Science, Dublin, in succession to Dr. Wyville Thomson. The next year he returned to London on the staff of the Royal Horticultural Society, as Professor of Botany, and in 1875 the appointment of Assistant-Director of the Royal Gardens at Kew was offered to and accepted by him. Mr. Dyer gave the address to students of the School of Pharmacy in 1884.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.O.

From the "*Trade Marks Journal*," May 11, 1887.

"MAY & BAKER," other wording and figures of medals, on engraved label; for chemical substances, Classes 1, 2, and 3. By May & Baker, Battersea. 58,972-4.

"ONE UNFAILING REMEDY," upon figure of a bottle on round label, with designation of depositor; for a medicine. By J. Stenson, 116 High Street, Camden Town, N.W. 59,240.

"LITTLE'S ORIENTAL BALM," over group of figures and sea view; for an ointment for medicinal purposes. By A. C. Berryman, 20 Sembudoss Street, Madras. 60,201.

"COOKE'S TAMARITTE ESSENCE" and other wording, on a label; for a medicine for human use. By F. H. Cooke, Coatham, Redcar. 60,208.

"THULE BOUQUET" and coat of arms, on label; for a perfume. By A. L. Laing, Lerwick. 60,648.

"STOCHY'S SYLVATICA NEVER FAILING OINTMENT" and figure, on a label; for an ointment for human use. By J. C. Parker, 8 Town End, Great Horton, Bradford. 60,899.

Signature of depositor; for chemical substances. Class 3 (60,961); and for perfumery (60,964); "Joseph Mack's Austrian Pine Products" and design on label (60,965); and figure of pine cones on label (60,966), for perfumery. By J. Mack, Reichenhall, Bavaria.

"DENSONS & COMPANY, VITAL STRENGTH PLANT FOOD," other wording, and figures of chrysanthemums; for the same. By J. W. Upton, trading as Densons & Co., 71 Braxfield Road, Brockley, S.E. 61,077.

"VARIOGRAPH," upon a design; for photographic chemicals and varnish. By R. T. Wall, Longfleet, Poole. 61,189.

"MALTHUS POPULATION PILL," figure of Death, &c., on label; for patent medicines for human use. By C. R. Mackay, trading as C. Roberts & Co., 17 Barony Street, Edinburgh. 61,262.

"LIEBIG'S EXTRACT OF MEAT AND MALT WINE" and signature, on label; for a food used for medicinal purposes. By Coleman & Co., Norwich. 61,264.

"BOURNE'S BICYCLE CEMENT" and figures; for a cement for cycle tyres, &c. By G. H. Bourne, Royston. 61,270.

"GOLDEN EMBROCATION, OR CURE ALL," and signature, on label; for an embrocation for horses, cattle, &c. By J. A. Thompson, Lacey Bridge, Leeds. 62,186.

A NEW PREPARATION FOR THE DISINFECTION OF ROOMS has been submitted to the Berlin Medical Society. It is composed as follows:

	Parts
Oil of rosemary	10
" lavender	2½
" thyme	2

Mix with diluted sulphuric acid, 30 parts.

Put up in a bottle and shake before use. The preparation is applied by saturating a sponge with it and allowing it to evaporate in the room.

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RHEUMATISM LUMBAGO,
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WOODHALL SPA
BROMO IODINE MINERAL WATER.
The strongest known Iodine Water in the World.

This remarkable Spa has been purchased by a Syndicate of gentlemen who have determined to make more widely known the extraordinary curative powers of this spring, which contains more Iodine and Bromine than any spring in Europe—
 "And, we may safely add, in any part of the World."—*Dr. Cuffe, for many years late resident Physician at Woodhall Spa.*

An analysis of the water having been made in November, 1886, by Professor Wanklyn, M.R.C.S., corresponding member of the Royal Bavarian Academy of Sciences, Professor of Chemistry, a very important discovery has been made, viz., the presence of Free or Elementary Iodine.

Dr. Wanklyn says—"So far as I am aware, this is the first instance in which free Iodine has been found in appreciable quantity in a natural water. For many years the Woodhall Spa has been celebrated as a valuable remedy in skin diseases. The fact that it is a solution of free Iodine is interesting in this connection, and well worthy of the attention of the medical profession."

The Woodhall Bromo Iodine Water is now being bottled at the Spring by the Sole Agents, **BROMLEY & CO.,** Chemists, 232 High Street, Lincoln, 5 & 6 The Grove, Buxton, and at Woodhall. All communications to be addressed to them at the Spa, Woodhall, Horncastle.

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EDITORIAL NOTES.

THE PHARMACEUTICAL COUNCIL'S ANNUAL REPORT.

THE politics of pharmacy are somewhat shadowed this year by the critical condition in which one of its national organisations now lies, and of which we are reminded by the receipt of only one report instead of the two which have visited us at this season during the past ten years. The surviving report—the forty-sixth of its kind—however, comes up smiling as usual, and in its first paragraph congratulates itself and everybody on "the continued satisfactory financial position of the Society." The statement accompanying the report shows that, notwithstanding the usual free expenditure, another thousand guineas was added to the hoard as the net result of the transactions of 1886, and as the total accumulation in the General Fund now amounts to close on 31,000*l.*, the satisfaction expressed in the first paragraph of the report is evidently well justified. One paragraph in the report is worthy of attention from this aspect. It is stated that "the ground lease of the premises 15 and 16 Bloomsbury Square, and of a piece of land in the rear, has been secured; a contract for building premises on the latter has been entered into, and the work is well advanced. It is intended that the accommodation in the new building shall consist of an examination hall, laboratory, and dispensary, to be used for the purposes of conducting the Society's examinations, and other laboratories for chemical and pharmaceutical research work, and for such other purposes as may be necessary." This is a large scheme which has grown out of the suggestion of a Research Laboratory, made by Mr. Giles three years since. It is likely that at that time Mr. Giles contemplated the expenditure of some 200*l.* or 300*l.* a year. The scheme as now filled in will hardly be put through on the present annual surplus, apart from the expenditure on building, which is not likely to be light. There will be the new rents and taxes, more furniture, more staff, an ornamental and a working director of the new laboratory; and there will be, besides, extra space available, for which Mr. Schacht and other of the imaginative members of the Council may be trusted soon to propose some costly uses. We by no means deprecate the extension of the Society's scientific operations, or the utilisation of its funds for the benefit of present rather than future pharmacists; but it seems to us desirable that the members should have some idea of the extent of the expenditure they are committing themselves to.

The Society's law costs in 1886 amounted to 403*l.*, and they prosecuted thirty-two cases of infringement of the Pharmacy Acts. Last year they reported the prosecution of thirty-three cases and an expenditure of 270*l.*, in which sum was included "surveyor's charges." It is much to be regretted that the lavish expenditure authorised on science and architecture has not been rather more equitably shared in promoting the more perfect prosecution of the legal functions entrusted to the Pharmaceutical Council. A very strong feeling of dissatisfaction with the Council is growing in the country in regard to the neglect of what appears to be their obvious duty of repairing their fortresses and consolidating their position before advancing to the attainment of all sorts of fancy advantages.

There is not much promise of a stirring meeting on Wednesday next; the Scotch difficulty has been smoothed out, and most of the usual complaints, both the well-founded

and the ill-founded ones, have been worn pretty threadbare. There will be, however, no doubt, a sufficient flow of criticism to prevent the meeting being a dull one, especially as the preliminary vent at the Inns of Court is this year denied us.

BRITISH AND AUSTRALIAN PHARMACEUTICAL EXAMINATIONS.

AN accomplished scientist connected with one of the colonial universities has received a set of examination papers, syllabuses, &c., and his criticisms on the whole are published in a long paper in *The Chemist and Druggist of Australasia* for April. The general object of the article was to compare the colonial standards with those of Great Britain, apparently in continuation of the discussion on the topic, prominent in Australian pharmaceutical politics, of reciprocity of registration. In the following paragraph the conditions as far as training is concerned are stated:—

"In Great Britain there is no compulsory apprenticeship; all that is required for admission to the Minor examination is that the candidate should be at least 21 years of age, and should have passed the Preliminary examinations, and that he must have been for three years practically engaged in the translation and dispensing of prescriptions, either as an apprentice or a student, or in any other capacity. In Victoria an apprenticeship of four years after the passing of a Preliminary examination is compulsory; in the other colonies where apprenticeship is compulsory—namely, in New South Wales, Queensland, and New Zealand—the period extends to only three years. In South Australia at present there is no Pharmacy Act, so that there is no compulsory apprenticeship; the passing of the Preliminary examination merely qualifies a candidate for registration as a student of the Pharmaceutical Society of South Australia, but is no step towards a legal advantage over an unqualified man. In New Zealand there is at present no Preliminary examination."

Victoria has lately followed the home lead in admitting the first book of the "*Æneid*" as alternative with "*Cæsar*" for the Latin portion of the Preliminary examination.

"With reference to this alteration, Mr. C. R. Blackett, speaking at the Pharmaceutical Conference, said that 'they (the Pharmacy Board of Victoria) expected the pharmacists of Australia to be men of culture and men who would show that they had received a liberal education, and were fit to enter the ranks of scientific bodies.' 'Mr. Blackett,' says this critic, 'would seem to be a believer in the virtues of a homœopathic dose of culture when he can speak so hopefully over the introduction of a single book of Virgil as an alternative at a schoolboy's examination for a book of *Cæsar*. It is hard to see what the Pharmacy Board has to do with culture; its functions ought to be, in the first place, to see that only qualified men are allowed to dispense to the public, and, in the second, to encourage pharmacists to become as proficient as possible in the science of their profession. The direction that a man's culture should take, like that of his religion, should be left to himself. As a matter of fact, the only reason that the pharmacist has for bothering himself with Latin at all is because the medical profession will insist on using it as an effective means of commanding the respect of uneducated people. When the medical profession becomes enlightened enough to feel ashamed of the quackery of its present method of writing prescriptions, the pharmacist will be spared the necessity of learning a smattering of Latin. Every other branch of science has abandoned the use of Latin (except botany, where the abandonment is, however, almost complete), and in the purely scientific departments of medicine no writer dreams of using it. However, as the British Society makes a book of Virgil an alternative for a book of *Cæsar*, the colonial societies and boards are wise to follow its lead, seeing that it would be rather hard on our future pharmacists if their British fellows could take a lofty stand of superior culture on the strength of a book of Virgil."

The writer finds an amateurish ring about the colonial

preliminary examination papers. As instances he quotes the following:—

"'What peculiarity of *Cæsar*'s style do you notice in the first sentence in (a)?' (a Latin paragraph). This was a Victorian question.

"How is a schoolboy who has read one book of the Gallic War to know anything of *Cæsar*'s peculiarities of style? To him the whole thing is one big peculiarity.

"In the same examination is also the question, 'What kind of a numeral is "singuli"?'

"This is a pure cram question. Of what value to any boy is a knowledge of the mere name, Distributive numeral, given by grammatical classifiers to such adjectives? All that he should be concerned with is its exact meaning.

"South Australia asks, 'What is meant by strong and weak verbs?' The logical answer to which would be: Everything that English verbs can mean. The examiner presumably meant, 'What is the distinction between "strong" and "weak" conjugations of verbs?'

After showing in what respects the British and Colonial qualifying essences differ as far as their published syllabuses indicate, the writer remarks that he leaves the practical pharmacy subjects to the criticism of pharmacists. But with regard to the scientific subjects, the object of examining in which is to ensure that the candidate shall have enough knowledge of the principles which underlie his everyday work to enable him to carry on that work as intelligently as possible, he remarks, in reference to

"the British Minor syllabus, the strangely illogical order in which the details of botany and chemistry are arranged. In botany the first requirement is that the candidate must recognise plants used in medicine, and after that comes the elementary botany which would help him to recognise and distinguish the plants; but in chemistry the perversity is more marked, for it is only in the last paragraph of the details that the candidate is enjoined to obtain a general knowledge of the laws of chemical philosophy. The order is exactly reversed, and is put properly in the British Major syllabus. The majority of the colonial boards, having adopted only this Major syllabus in chemistry and botany, avoid these blemishes in the British Minor syllabus, at least as far as the syllabus alone goes, but a perusal of the chemistry papers set in the different colonies shows that they are produced purely in the British Minor spirit.

"The mistake that is made both in the British Minor syllabus and in all the colonial chemistry papers is one that was so prevalent in all departments of applied science 30 years ago, and is by no means eradicated yet, namely, that all scientific knowledge can be separated into two distinct divisions, theoretical and practical, and that where a man has not time to acquire a certain amount of the theoretical knowledge as an accomplishment, he should leave it alone and gather as much practical knowledge as possible. The idea that appears to have been in the minds of the framers of the original syllabus was, that a student should not be troubled with any chemistry that had not an immediate practical bearing on pharmacy; hence his examination was to be confined entirely to the chemical facts that had a pharmaceutical connection. Now this is the wrong end at which to start any student's work in a subject like chemistry. No matter how little may be required of him, that little should be founded as far as possible on general principles. The schoolboy does not learn a different arithmetic according as his father wishes him to become a grocer, a draper, or a clergyman; whatever arithmetic he has to do in his future career is founded on the general principles he learnt at school, and so every beginner at chemistry, whatever his ultimate profession may be, should receive the same general introduction to the elements of chemical philosophy. Professor Atfield in the preface to his well-known text-book states that his sole aim 'is to teach the general truths of chemistry to medical and pharmaceutical pupils. So far as laws and principles are concerned, the book is a work on General Chemistry; but inasmuch as those laws and principles are elucidated and illustrated by that large portion of chemistry which is directly interesting to medical practitioners and pharmacists, the book may be said to be a work on Medical Chemistry and on Pharmaceutical

Chemistry. Only in this conventional sense would the author speak of Medical and Pharmaceutical Chemistry; for the truths of chemistry are the same for all students—crystalline verities which cannot be expanded or compressed to suit any class of workers.' This is Professor Attfeld's general conviction, but, the writer thinks, in his desire to meet the wishes of the so-called practical men, he has been led in the body of the work a good deal away from the theory of his preface, and has displayed at too great length pharmaceutical facts at the expense of general theory, at least for beginners, and the same is the most pronounced defect in all the colonial chemistry papers."

As a model of examination papers, he mentions those set by Professors Redwood and Dunstan for the Prize Examinations of the School of Pharmacy.

"There would not be much profit, he concludes, in a detailed comparison of the papers set in the different colonies on chemistry and botany. They all have the same defect of offering a premium to unintelligent cram, and it is difficult to draw much distinction between the amount of cram that would satisfy the Melbourne, Sydney, or Brisbane authorities. No one colony can be said to demand more real chemical knowledge of its students than another.

"A favourite question in the chemical part of the Victorian practical pharmacy examination is to ask the crystalline forms of a list of chemical compounds. What could be more dismal cram and mere word-grinding than this. A question of this sort sets one wondering what would be the effect if the Pharmacy Boards, each time that they appointed examiners, appointed at the same time three of their members to go in for the examination, to make sure, for instance, that the papers set might not be too hard. How would the appointed three like to have their time occupied in committing to memory the mere names of the crystalline forms of all the chemicals on a pharmacist's shelves?"

As one specimen of amateurishness he quotes one of the Victorian chemical questions:—

"'Give in grains, the specific gravity of a liquid, a fluid ounce of which weighs 26·32 grammes.' The examiner, when he was yearning so strongly after the impossible, might as well have asked for the specific gravity in years or yards. Of course, a more charitable construction to put upon this question would be to consider it as what is known as a 'catch' question. But such petty and insincere dodging as the setting of examinational man-traps is never employed in any examinations of repute, and ought to be allowed to die out with the old-fashioned type of dame's school in which it originated."

BACTERIOLOGY AND OUR WATER SUPPLY.

WE called attention last year (CHEMIST AND DRUGGIST, July 24, p. 112) to the experiments by the chemical advisers of the London Water Companies on the development and life duration of certain micro-organisms in ordinary water. These chemists proved that the bacillus most tenacious of life, viz. *bacillus anthracis*, was comparatively short-lived when subjected to conditions such as may be met with in the reservoirs and water-mains of the Metropolis. Similar experiments with different conclusions had previously been reported by Dr. P. F. Frankland, the chemical adviser to the Local Government Board. Dr. Frankland has since continued to apply the biological test concurrently with the chemical one in his monthly examinations of London water, and last week he presented a statement of his results to the London section of the Society of Chemical Industry. He proves conclusively that our domestic water contains an immense number of micro-organisms, but that this number is almost infinitesimal in comparison with the myriads which infest the water before filtration. It is by no means cheering to learn that a single drop of a water which passes the chemical test contains a hundred or two bacilli of the

effect of which we know nothing. Dr. Frankland tells us that they may do no harm, but all will agree that the water companies should make their filtering-beds as highly efficient as possible, and that the biological test should not be neglected in water analysis. There appears the more reason for this when we compare the results of the chemical and biological analyses of the same water, and find that the former skips a contamination which the latter detects with a fair degree of accuracy. Every year the germ theory of disease becomes more securely implanted in medical science. At present the number of diseases actually known to be propagated by micro-organisms is small compared with the number of "ills that flesh is heir to"; but it is being gradually added to, and the importance of the study no sane man will dispute. It is therefore of the highest importance that our investigators should determine the history of these organisms after they have attacked beings in a higher scale of existence. We know that sewage is the first condition of matter to receive this surplus stock of living organisms, and this sewage, in course of time, mixes with the water which is afterwards used by man and beast. Hence Messrs. Crookes, Odling, and Tidy endeavoured to determine how long the anthrax bacillus would live in ordinary water, and they found the time comparatively short. Dr. Frankland's experiments in the same direction are not so comforting. He finds that the bacillus, or its spores, undoubtedly survive in distilled water at the end of 61 days, and also in filtered Thames water, and that the bacillus multiplies in sewage, more than doubling itself at the end of two months. Koch's cholera bacillus also showed wonderful vitality, it being detected in Thames water eleven months after inoculation, so that it is practically indestructible, while the typhoid fever germ is sufficiently tenacious of life to be detected in water many days after the water has been contaminated with it. There are some micro-organisms, however, such as the bacilli of erysipelas and British cholera, which at once lose vitality when placed in water. It should not be a difficult matter to greatly extend the field of experiment so that all the known micro-organisms may be subjected to the water test. The question whether the existence of the organisms in water is a source of danger or not belongs to another department of science.

The disease which the anthrax bacillus produces is of such a fatal nature that we may be apt to exaggerate the importance of Dr. Frankland's results; but it is to be hoped that they will tend to emphasise the importance of doing the utmost to exterminate that organism at its source of supply. The same applies to the typhoid fever and Koch's cholera bacilli. Disinfection and isolation, which are at present the only known means for preventing the dissemination of those organisms, cannot be too thoroughly enforced wherever the diseases exist.

On Saturday, May 7, Professor Bentley commenced his 39th annual course of botanical lectures to pharmaceutical students in the Royal Botanic Gardens. We hear with a regret

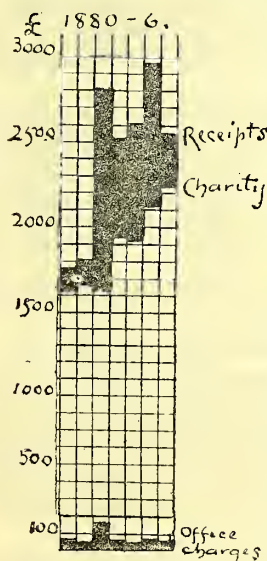
which will be shared by generations of older students, and by those who last week began their botanical studies, that this course is to be the Professor's last official service to the Society, of whose staff he has so long been a most distinguished member. We need not repeat the particulars of an opening lecture which, with variations, has been frequently reported in these columns; a few illustrative sentences only will be introduced. The change of hour (8.30 instead of 8 o'clock) has not proved satisfactory, and the thirty minutes' grace accorded has not promoted regularity of attendance. That the Gardens are not yet in full beauty is hardly an unmixed disadvantage, since there will be a chance of studying the delayed flowers which of right belong to April, with those of

May and of a later summer. If one may use the expression, vegetation is postponed; but a few weeks' genial warmth would restore the face of nature.

After a few preliminary remarks, Professor Bentley entered upon the immediate object of the lectures, and pointed out the necessity, as well as the difficulty, of correct description and definition, especially when it was considered what a vast amount of plants there were which had to be considered. The beginner stood in need of three requisites: a good book, a sharp penknife, and a decent lens. A distinction was drawn between the terms *shape*, by which was intended outline or configuration, and *form*, which was not mere outline, but included length, breadth, and thickness. It was correct, therefore, to allude to the shape of a leaf and the form of a root. "Now," said Professor Bentley, reminded by the quaint name of Devil's Bit Scabious, "if you want to read a book as sensational as you please, and as fascinating, let me ask you to turn to the pages of Gerard's 'Herbal.' You will find it a storehouse of learning and amusement happily combined." Cordially we would support the recommendation, for Gerard is a splendid tome, with a fine mediæval flavour on its pages; and it was written when men had leisure and the will to read, and before the exigencies of modern education had forced the student to dilute his mind with treatises published at one shilling (ninepence with the discount), short cuts, and science arranged on the system of the hymnology of Dr. Watts. At the close of the lecture, reminded by the term "climbing stem," the Professor passed an eulogium on the marvellous research exhibited in the whole series of publications bearing the name of Darwin.

It seems hard that these botanical discourses should approach their end. For years they have been eminently useful, not only to the student, but to many who have chosen this branch of natural science as their life-work. We join in the expression of profound respect for the personal character of Professor Bentley, and for the successful and conscientious manner in which his duties have been performed.

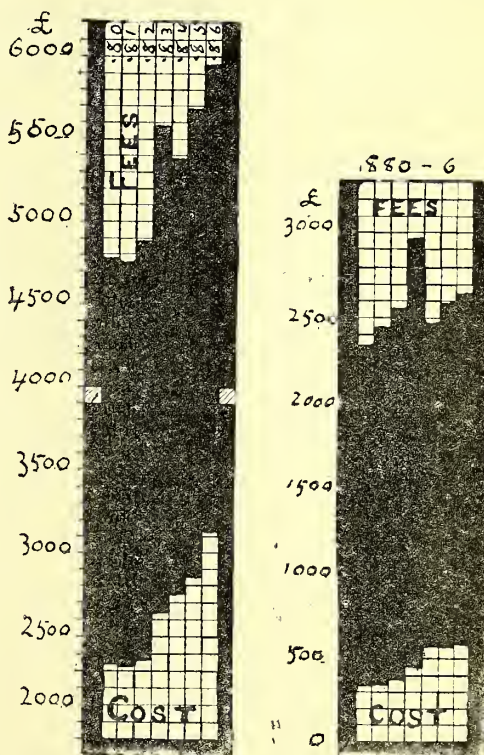
The Benevolent Fund. When the Pharmaceutical Benevolent Fund dinner was held twenty years ago the income of the fund from all sources was 600*l.*, and the amount granted in relief was 354*l.* That was the year in which, through the Pharmacy Act, the benefits of the fund were extended to all chemists and druggists. It is interesting to note the effect of the extension. In the following year the income was 879*l.*; in 1872 it was 1,196*l.*, and the relief granted was 525*l.* By the time of the last dinner the year's receipts were 1,674*l.*, and the amount of relief 1,261*l.* This increased liberality has been kept up during the past seven years, as will be seen from the annexed diagram. "Receipts" are from invested funds, legacies, donations, and subscriptions. "Charity" represents annuities and casual grants. The meagre black at the bottom is the small expense incurred for stationery and postage. Occasionally there has been a charge for surveying, but that we exclude. This small charge is the best testimony to the charitable spirit with which the fund is conducted, and its increased usefulness is the only appeal necessary to be made to those who have not previously supported it. We may recall the fact that between 1,600*l.* and 1,700*l.* has hitherto been collected at the dinner.



Pepper Since we wrote on this subject no less than three substances have been discovered in commercial pepper which have little in common with that article. We have already reported a case of adul-

teration with long pepper, and this week we briefly report a case in which exhausted ginger is the diluent. Mr. Heisch referred to long pepper at the Maidstone meeting of the Society of Public Analysts in August last, and hesitated to say whether it could be considered an adulterant of black pepper; but Dr. Campbell Brown has since shown that, irrespective of cost and increased profit when it is so used, long pepper differs so much from ordinary pepper in flavour that the consumer certainly objects to it. The admixture may be detected by the colour and odour of the sample, or, as Dr. Brown points out, the woody matter of long pepper is so different from that of ordinary pepper that if the sample is spread out in a smooth thin layer on strong paper, by means of an ivory paper-knife, pieces of fluffy woody fibre will be detected, especially if the smooth thin layer be tapped lightly from below. Those pieces come from the central part of the indurated catkin, which cannot be completely ground fine, as genuine pepper stalks are, and are very characteristic if carefully examined. Much of these are of course removed by the grinders' sieves; but enough finds its way through the meshes of the silk to be useful as a corroborative indication. Spent ginger consists almost entirely of woody fibre and starch, and the abnormal amount of these in any sample of pepper is detected by the ordinary methods. The third new adulterant is dari, or dhoura, a millet grain which has been largely imported into this country from Egypt and India since the repeal of the malt tax, and is used to some extent in brewing.

The Examination Business. The Pharmacy Act of 1868 did a good turn for the Pharmaceutical Society in giving it charge of the examinations enforced by the Act. The diagrams given below represent, the one towards the left the Major, Minor, Modified, and Pre-



liminary; the one to the right is the Preliminary alone. In each case the amount of black between costs and fees represents the profit, excluding the charges for house-room, office expenses, and the like. From the bottom to the top of the black represents the fees, the cost is represented by the white space at the bottom. It will be seen, therefore, that even though we allow 500*l.* for extra expenses for the technical examinations, and 200*l.* for the Preliminary, the examinations are a paying business.

Trade Report.

Note to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., May 12.

THERE are but few changes to record in the Mincing Lane markets this week. The slight advance in *Citric acid* which occurred a short time ago, and which from the first was looked upon with suspicion in the best-informed quarters, has proved of very short duration. In *Carbolic acid* rather more business is said to be doing, while *Morphia* is very firm, in sympathy with the advance in opium reported from Smyrna. *Quicksilver* is still quoted at the reduced price established some days ago. *Iodine* and its preparations are firm, and so is *Refined camphor*, although somewhat less interest is shown in the crude article. The cinchona sales held this week concluded without any material alteration in value of the bark, and *Quinine* remains extremely quiet and weak. Heavy chemicals are quiet, but in *Caustic soda*, *Soda crystals*, and *Soda nitrate* a good business is reported, and prices tend somewhat higher.

Drysalteries remain depressed, but it is stated that privately *Shellac* has met with somewhat more attention. *Cloves* are very firm indeed at the recent advance, and the good descriptions of Jamaica and Cochín *Ginger* continue to advance, while inferior grades are abundant and saleable only at a reduction. *Pepper* is dull. There is some talk that the crop of olive oil in North-western Africa will be a short one, but as yet Magadore oil is still selling at very low rates. For *Rape* and *Linseed oils* more money must be paid.

The alterations in drug prices are few, the trade awaiting next week's auctions. Meanwhile *Fennugreek seed* and *Soy* are very steady, while *Gentian root* is becoming very scarce in the South of Europe. *Galangal* is selling at a slight recovery from the very low rates recently prevailing, but is still very cheap. Jamaica *Lime juice* is said to be in good demand privately, and to have changed hands at an advance. Essential oils of *Cloves* and *Star anise* are again dearer. In *Cocoa-butter* a very sharp advance has occurred both in England and on the Continent.

The letter from a London drug-broker on the proposed alteration of the drug sales from fortnightly to monthly has elicited several replies from firms connected with the drug trade. In another column we publish abstracts from the correspondence, from which it will be seen that, if a soft answer is reported to turn away wrath, a polite request appears occasionally to cause the milk of human kindness to curdle in the breast of a London drug-broker. But then business generally has not been very brisk lately in "the Lane," and the mortification of having to buy in time after time the bulk of the goods in one's catalogue, frequently with the accompaniment of unappreciative manifestations on the part of the audience, may ruffle the best of tempers. An idea appears to prevail that the matter will be brought forward at the next drug sales, or that a meeting of those concerned will be called at an early date to discuss a suggestion which may, for good or evil, exercise a vital influence on the future of the London drug market. The Amsterdam Quinine Works, the sale by public auction of which was announced in our journal some weeks ago, have been publicly sold to one of the former directors of the concern, Mr. W. Sieger, at the price of 101,285.75f. (about 8,500*l.*). It is stated that the real buyers are a firm of well-known quinine manufacturers in Germany, and that the works will again be started as a limited company with a share capital of 250,000*f.* (about 20,800*l.*) for the

purpose of manufacturing quinine and other chemicals. Rumour has it that Messrs. C. F. Böhringer & Sons, of Mannheim, have taken up a considerable part of the shares, and will be prominently connected with the working of the new concern. A second German East African planting company is in course of formation. The German Government have also under consideration a scheme for subsidising a line of steamers to the east coast of Africa, and a proposal to this effect will shortly be laid before the Reichstag. The Royal Stamp Manufactory at Madrid are prepared to receive tenders for the supply of 4,000 kilos. gum arabic, particulars of which may be had upon application at the works. The supply will be allotted on May 23. No maximum price is named on this occasion. When the works contracted for their previous supply in September, 1886, the maximum price was fixed at 5 pesetas per kilo.

ACID (CARBOLIC) in 1 lb. bottles is quoted at 1*s.* 4*d.* It is stated that business has been somewhat brisker in the article of late.

ACID (CITRIC) is lower, and quoted at 1*s.* 7½*d.* per lb. both on the spot and for May-June. The recent rise has proved a very hollow affair indeed; in fact, as we pointed out in our issue of April 30, the general idea has been all along that there was no sound reason whatever for the spurt. But, then, every one who owns a cask of citric acid has his own 'private' views about the article, by dint of which he is able to see farther through a brick wall than his neighbours.

ACID (OXALIC) is somewhat neglected at 4*d.* per lb., while *acid acetos* still sells at 6*d.* per lb.

ACID (TARTARIC) is very neglected, and cannot be quoted above 1*s.* 6½*d.* to 1*s.* 6¼*d.* per lb. for *foreign*, and 1*s.* 6¼*d.* for *English* brands.

ALUM.—The demand is slack, and the price for ground alum is now 6*l.* per ton, but lump is still held at 5*l.* 10*s.* per ton.

AMMONIA.—*Carbonate* remains in a neglected condition at 4*d.* per lb. less a heavy discount, while *sal ammoniac* maintains its price of 36*s.* for first, and 34*s.* for second quality. *Sulphate* is slightly dearer, and quoted at 11*l.* 5*s.* in London and 11*l.* 6*s.* 3*d.* at Hull for grey 24 per cent.

ANNATTO.—The latest Pará steamer has brought to Liverpool a fresh consignment of 40 baskets roll annatto.

ARSENIC.—White powder is still selling in fair quantities at 11*l.* 10*s.* per ton.

BALSAM (PERUVIAN).—A Hamburg firm, who usually import balsam directly from the producing country, have suddenly entered the market as buyers, and created a demand for the article on the Hamburg market, which has probably caused 125 cases, spot and forward delivery, to change hands. The Bremen stock (only 8 cases in first hand) and whatever parcels were offering at a low price in London are said to have all been secured by the operators.

BLEACHING POWDER is very quiet, with little business; the price remains 8*l.* 1*s.* to 8*l.* 15*s.* per ton.

BORAX remains unchanged at last week's quotations.

CAMPHOR.—*Crude* is offering rather more liberally at the prices last quoted, but there is little doing in the article. During the month of April 692 packages were added to our supply in first hand, but 1,256 left the warehouses. At the end of the month the stock amounted to 4,572 packages, against 6,985, 9,486, and 8,645 packages at the corresponding periods of the three preceding years. *Refined* camphor steady at last week's quotations.

CASSIA FISTULA.—An Amsterdam wholesale druggist writes:—"Can any of your readers give an explanation of the fact that the pulp of cassia fistula is next to unsaleable, whilst there is a strong demand for the pods?"

"Some years ago I caused one of my correspondents in Java to free a parcel of selected cassia fistula pods from the woody parts, and to ship to me the pulp and seeds in tins. This pulp arrived in good condition, and is still perfectly fresh, and no doubt of equal quality to the pulp which can be got from the best pods imported in Europe.

"The pulp alone can of course be delivered in Europe at a price comparatively much more advantageous to the consumer than that of the pods, as the high rate of freight charged on the voluminous pods does not weigh on the heavy pulp. All advantages are on the side of the latter mode of shipment, and, notwithstanding this, the trade seem to reject the pulp and approve of the pods only."

CASSIA LIGNEA remains quiet, at 24s. 6d. per cwt.

CINCHONA.—At the periodical auctions held on Tuesday a total supply of 4,486 packages was offered, of which slightly more than one half sold without any improvement in value. There was very little demand for the South American bark offered, except so far as a consignment of very good cultivated Bolivian bark is concerned. The bulk of the Ceylon bark was sold, and the whole would doubtless have been disposed of had not the holders' views in some instances been above the present value of the market. Indian bark sold well, being offered with some amount of pressure, while consignments from Java and the West Coast of Africa were also entirely disposed of. The unit averaged 23d. The following prices were paid:—South American bark: Good to fine rich Bolivian cultivated *Calisaya* quill at 9½d. to 1s. 8d.; bold druggists' kind up to 3s., and *Cuprea* at 2d. to 5d. per lb. Ceylon *Succirubra*: branch, 1½d. to 3½d.; chips, small and mixed to good bright, 2d. to 6d.; spoke shavings, 3½d. to 7d.; root, 3d. to 6d.; quill, crushed and broken, 5d. to 5½d.; medium size, dull to rather bold, 7d. to 11d.; renewed, weak to fine, 3d. to 11d. *Officinalis*: Original branch, 2d. to 2½d.; chips, 4d. to 8½d.; root, fine, 9½d. to 11½d.; renewed, 6d. to 8½d. *Hybrid*, &c.: Branch, 1½d. to 4d.; chips, 2½d. to 1s. 2d.; spoke shavings, 4d. to 5d.; root, very rich, 1s. 2d. to 1s. 3d.; renewed, 3½d. to 7d. Indian barks were nearly all sold: *Darjeeling* *Ledgeriana*, good strong branch, at 2½d. to 3d. Wynaad-Mysore *Succirubra*: Natural dust, 3d. to 5d.; branch, 1d. to 3½d.; chips, 1½d. to 9d.; spoke shavings, 4d. to 6d.; root, 3½d. to 4d.; quill, dull, crushed and broken, 3d. to 7d.; druggists' sort, medium silvery, 1s. 8d. to 1s. 9d.; choice bright, very mossy, strong bold, 2s. to 2s. 3d.; renewed, 5½d. to 11½d. *Ledger*: Branch, 4½d.; chips, 9d. to 1s. 1d.; Madras crown mossed, 10d. to 11d.; renewed, 1s. 2d. per lb. An indifferent assortment of Java bark realised, for *Ledger*: Branch, 4d.; chips, quilly, strong, 5½d. to 8½d.; and root, 8d. to 1s. From the African West Coast 44 bales *Succirubra* quill, weighing about 2 tons, were offered, and sold as follows:—Quill, broken and mixed with young, 5½d.; small to medium size, silvery, rather mixed, 9½d. to 10d. per lb. The following figures relate to the present position of "medicinal bark" in London:—

Imports, Jan. 1 to April 30 .. pkgs.	1887	1886	1885
Deliveries	27,955	22,804	16,541
Stock on April 30	28,733	21,100	18,634
	61,684	63,414	78,378

The Board of Trade Returns give the following figures concerning the movement in "Peruvian bark" during the first four months of the year:—

Imports	1887	1886	1885
Re-exports	57,612	45,533	38,589
	54,747	36,514	30,220

A company is being launched at Amsterdam with a view of extending the cultivation of cinchona in Western Java. The company purpose to take over three existing cinchona and coffee plantations, on which there are now 2,624,525 cinchona trees, and to increase the production. The capital of the company has been fixed at one million florins (about 83,000*l.*), and about three-fourths of this amount has already been subscribed.

CLOVES are in good demand, and on Wednesday about 150 bales *Zanzibar* were sold at the advance established last week, viz. 11½d. to 11¾d. for darkish to fair, and 11¾d. to 1s. per lb. for good to very good bright. *Penang* cloves are about 1½d. to 1¾d. per lb. dearer, and have been sold at 1s. 2d. to 1s. 2½d. per lb. for fair to fairly good. The following figures are given concerning the statistical position of the article:—

Stock, May 7	Packages	1887	1886
<i>Zanzibar</i>	4,861		
<i>Amboina</i>	997		
<i>Penang</i>	899	6,757	7,788

Imports, Jan. 1 to May 7

<i>Zanzibar</i>	4,817		
<i>Amboina</i>	55		
<i>Penang</i>	347	5,219	3,309

Deliveries, Jan. 1 to May 7

<i>Zanzibar</i>	4,109		
<i>Amboina</i>	230		
<i>Penang</i>	137	4,476	6,092

COCHINEAL quiet at 1s. 1d. to 1s. 5d. per lb.

COCOA BUTTER has made a considerable advance, 100 2-cwt. cases *Cadbury's* brand having sold at auction recently at 1s. 3½d. per lb. to 1s. 4½d. per lb., a rise of about 30 to 35 per cent. While this sale was in progress at London, 22 tons *Van Houten's* cocoa butter were disposed of by auction at Amsterdam at 62½c. to 67½c. per half kilog. (= 11½d. to 12½d. per lb.). When it became known that up to 16d. per lb. had been paid in London, the price rapidly rose to 80c. per half kilog. (= 14½d. per lb.), and there is only little obtainable at that figure now. This movement is a remarkable fact, as usually when the weather becomes warmer the prices recede in sympathy with the increasing production. Last year in May the value of cocoa butter was about one-half of the price now paid.

CREAM OF TARTAR quiet, at 123*l.* per ton on the spot for first quality.

ERGOT OF RYE is rather quiet at previous quotations. There is no lack of supply in this article.

FENUGREEK SEED remains very firm, with a small supply.

GALANGAL is in fair demand at the recent advance. On Tuesday 244 packages old sea-damaged root sold at 6s. 6d. to 6s. 9d. per cwt., a very good price considering the quality.

GALLS.—*Turkey* varieties are quiet, especially for white and green galls; good blue *Bassorah* are held at 62s. 6d., green at 55s., and white at 52s. 6d. to 55s. per cwt. *China* galls very quiet, with a tendency towards a decline: 57s. per cwt. would probably be the nearest value. Our stock at the end of April was given as follows:—

	1887	1886	1885
China and Japan	3,093	3,313	2,440
Turkey and Persia	6,438	5,707	4,607

GENTIAN ROOT is reported to be very scarce in Italy, 15s. 6d. to 16s. 6d. per cwt. being the price, f.o.b. Italian ports.

GINGER.—Good qualities sell steadily at advancing rates, but ordinary and old descriptions are cheaper. At Wednesday's auctions 392 packages *Cochin* and 413 packages *Jamaica* ginger were mostly disposed of, at the following rates:—*Cochin*, ordinary to good small rough, 23s. 6d. to 28s.; medium to bold ditto, 35s. to 54s.; small common to fair medium washed, 23s. 6d. to 38s.; bright small cut and part cut, 35s. 6d. to 36s.; medium to bold cut, 52s. to 82s. *Jamaica*, ordinary damaged, 33s. 6d.; washed, ordinary and small, 45s. to 49s.; middling to good, 50s. to 74s.; very fine selected, 115s.

IODINE firm, at an unchanged quotation. *Iodides* are all very firmly held.

IPECACUANHA.—During the month of April 12 packages were landed here, and 22 taken out of the warehouses. This left us at the end of the month with a stock, in first hand, of 20 packages, against 170, 176, 213, 349, and 250, on corresponding dates of the five preceding years.

The following is from the New York *O. P. & D. Reporter*: "The advices received from South America are that while the cholera epidemic in the producing countries lasts, there is little or no prospect of fresh supplies. It is argued that if any stock had remained at the South American seaports from shipments from the interior prior to the outbreak of the cholera, the comparatively high prices would have drawn it out long ago, and the natural inference is, therefore, that the consuming markets will be compelled to rely entirely upon the stock now on hand until the condition of the primary market is such as to permit of the sending out of supplies. This cannot be expected for many months, and at the present rate of consumption, the prospects are that the available supply will be entirely exhausted long before that." On the other hand our New York correspondent reports an impres-

sion that the quarantine in the Brazilian province of Matto Grosso will shortly be raised.

LEAD (ACETATE) remains firm and scarce at 24s. for prime white foreign.

LIME JUICE is reported to have sold privately at a good advance; it is said that 1s. 6d. to 1s. 7d. has been paid for good *Jamaica*. In public sale on Wednesday five puncheons were bought in at 1s. 8d.

MORPHIA.—The firmer position of opium has not as yet affected the quotations for morphia, which is still held at 6s. 6d. per oz.; but holders are decidedly firmer, and no longer disposed to offer the same concessions for quantities which they were willing to make the other day. Second-hand lots are also becoming fewer.

MUSK.—We notice the arrival of 14 packages since our last report. Of these, however, only a few came direct from China. Four arrived from France, where consumers appear to be overstocked at present.

OILS (ESSENTIAL).—*Star-anise* has made a further advance since last week, and it is now held at 7s. 6d. per lb., but we hear of no actual business over 7s. 5d. per lb. Uncovered sales of some importance are said to have been made, and some difficulty is experienced now by the speculators in covering themselves without loss. The home consumption of the article is decidedly on the increase; but the Continental demand, which formerly was a factor of importance, is now to some extent covered by direct purchases. During the first four months of this year 28 cases of this oil only arrived here, while 74 were taken out of the warehouse. At the end of last month our first-hand stock only numbered 129 cases, against 262, 305, and 375 on April 30, 1886, 1885, and 1884. *Cassia* is quoted at 2s. 9d. per lb., at which price there are sellers, with buyers in a small way at 2s. 8d. per lb. Nothing of any consequence has been done this week; and the position can be best summed up by saying that a demand for, say, 20 cases would drive up the price to 3s. per lb., while a forced sale of a similar quantity would scarcely realise more than 2s. 6d. per lb. Although the stock in China is said to be a very light one, and the arrivals from the interior wanting, the statistical position of the article on our own market is scarcely as favourable. The figures are:—

	1887	1886	1885
Imports, Jan. 1 to April 30 .. chests	150	277	—
Deliveries, " " " " .. "	84	206	50
Stock, April 30 .. " " " " .. "	165	237	112
Price " " " " .. per lb. 2s. 9d.	3s. to		
	to 2s. 10d.	3s. 3d.	—

Citronella remains very quiet at $\frac{7}{8}$ d. to $\frac{1}{10}$ d. per oz. for native brands, $1\frac{3}{4}$ d. per oz. for Fisher's oil. *Oil of cloves* has again advanced to 7s. per lb., in sympathy with the spice, and is very firm. American *Peppermint* of the H. G. Hotchkiss brand is quoted at 15s. 6d. per lb. on the spot, and offers of 15s. per lb. for forward delivery are solicited. Last week there were buyers for the latter at that price, but this week there are apparently none. A steady business is reported in *Otto of rose*, but no change in price has occurred. French and Italian essential oils are firm at the recent quotations.

OIL (CASTOR).—First quality Calcutta oil is quoted at $4\frac{1}{2}$ d. per lb. here. In Calcutta, according to the latest mail advices, there was a good demand from English buyers.

OIL (COCOA NUT).—Very little business is being done here, but rather more interest is shown in forward delivery. *Ceylon* oil on the spot is now quoted at 24l. for pipes, for forward delivery 24l. 5s. has been offered. *Cochin* oil on the spot is held at 31l. 10s. to 33l., while 29l. would be paid for April-June shipment. *Mauritius* oil quiet at 26l. 10s. nominally. At the beginning of the month the statistical position of the article was as follows:—

	1887	1886	1885
Afloat from Cochin and Ceylon	1,045 net.	876 net.	1,488 net.
Landed, from Jan. 1 to April 30	1,513	1,366	2,000
Delivered, " " " " .. "	987	1,301	1,915
Stock, May 1 .. " " " " .. "	1,691	1,605	2,754
Price of Cochin .. " " " " .. 31l. to 32l.	28l. 10s. to 29l.	34l.	
" Ceylon .. " " " " .. 24l. to 24l. 10s.	24l. 15s.	28l.	
" Mauritius .. " " " " .. 24l. 10s.	25l. 5s.	28l. 10s.	

OIL (COD-LIVER).—The position remains practically unchanged, the principal holders not caring to sell at the prices which the trade are prepared to pay. The Finmarken fishing has proceeded with varying results, but so far the market has not been influenced by it.

OIL (COTTON-SEED).—Slightly weaker for crude on the spot. Other descriptions firm. *Crude*, spot, 17l. 12s. 6d. *Refined*, spot, 19l. 5s. to 20l. 10s.; May-August, 19l. 10s. to 19l. 15s.; September-December, 18l. 15s. to 19l. The Hull prices are: Spot, casks, 18l. 7s. 6d.; May-August, 18l. 10s. to 18l. 12s. 6d. *Crude*, spot, 16l. 2s. 6d.

OIL (LINSEED) is dearer in all positions and closes firm. On the spot 20l. 15s. to 21l., according to packing and delivery; May-August, 20l. 17s. 6d. to 21l.; September-December, 20l. 2s. 6d. to 20l. 5s. Hull, spot, 20l. 10s. to 20l. 15s.; May-August, 20l. 10s. September-December, 19l. 12s. 6d.

OIL (OLIVE).—The market remains unchanged at 35l. for *Spanish*, and 32l. for *Sicilian* oil. The *Mogadore* variety is quoted at 30l. 5s. to 30l. 10s., and it is said that the crop of that grade is expected to turn out a small one. We hear from Naples that the olive trees present an excellent appearance. The budding is abundant at Gioja, and fairly good in the other districts; but although it is yet too early to form any reliable opinion, the improved crop prospects have discouraged holders, and prices have receded. The critical time of the flowering, when a few days of unfavourable weather might seriously compromise the crop prospects, is now approaching, and at the present low range of prices our market will be likely to be more than usually sensitive during this period.

OIL (PETROLEUM) quiet at unchanged rates, viz., $5\frac{3}{4}$ d. to $5\frac{9}{16}$ d. for *American*, on the spot, $5\frac{3}{16}$ d. for May, and $5\frac{1}{2}$ d. to $5\frac{1}{2}$ d. for September-December. *Russian* oil on the spot is held at 5d. to $5\frac{1}{2}$ d., and for September-December, at $5\frac{1}{2}$ d. to $5\frac{3}{4}$ d.

OIL (PALM).—Very quiet, at 21l. 10s. for good *Lagos*.

OIL (RAPE) has advanced and is now quoted:—English, *brown*, spot, 21l.; May-August, 21l.; September-December, 21l.; *refined*, spot, 22l. 10s.

OPIUM.—Telegraphic advices from Smyrna report a fresh advance in the quotations of opium on that market. Lately the arrivals at London have been somewhat in excess of the deliveries. The following was the statistical position of the article on the London market at the end of last month:—

	1887	1886	1885
Imports, Jan. 1 to April 30 .. pkgs.	737	301	457
Deliveries, " " " " .. "	805	508	627
Stock on April 30 .. " " " " .. "	2,083	1,940	2,202

ORRIS ROOT.—In Italy the market is assuming a slightly firmer tone, many parcels having passed into the hands of consumers lately. The stock is now said to be a very moderate one, and is held at the parity of 22s. to 27s. per cwt. for small darkish to fine selected *Florentine*, and 12s. to 15s. per cwt. for ordinary to good *Veronese*.

PEPPER (BLACK) is dull, and in auction the bulk of the 1,963 bags offered was bought in, but we understand that after the sales a good many transactions were made at secret prices. Good to fine washed *Singapore* has been sold at $7\frac{1}{2}$ d. to $7\frac{3}{4}$ d. per lb. Pepper, the *Trop. Agric.* remarks, has been one of the oldest of Ceylon exports; the Dutch paid attention to it, but since then it has become of little importance, save in its growth by natives for consumption in their local markets. But among the new products which have of late years been claiming the attention of European planters is pepper, and we are glad to learn that a favourable report has been obtained on the North-Matale-grown article which has been valued in quantity at 8d. to $8\frac{1}{2}$ d. per lb. At Perak, the Government are also trying to popularise the cultivation of pepper by offering ground on easy terms for growing the plant and advancing money to intending cultivators.

PIMENTO sells fairly steadily at 2d. to $2\frac{1}{2}$ d. per lb. for ordinary dark, and $2\frac{3}{4}$ d. to $2\frac{3}{4}$ d. for fair to good.

POTASH.—*Bichromate* remains quiet at $3\frac{1}{2}$ d. per lb., while *chlorate* is fairly steady at $6\frac{1}{2}$ d. per lb., and *yellow prussiate* maintains the recent advance to $7\frac{1}{2}$ d. per lb.

QUICKSILVER is still held at 6*l*. 17*s*. 6*d*. by the importers, but second-hand holders sell at 1*s*. per bottle under that price. The following is the statistical position of the article so far as our market is concerned:—

	1886	1887
Imports, Jan. 1 to April 30 bttls. about	30,199	34,977
Exports, " " " " "	27,783	20,377
Imports for April " " " " "	6,036	11,752
Exports " " " " "	8,838	6,357
Price .. " " " " "	6 <i>l</i> . 5 <i>s</i> .	7 <i>l</i> .
Estimated London stock on April 30 " "	66,000	61,000

QUININE, quite neglected at last week's quotations. It is said that violent efforts are being made to still further depress the market by operators desirous of purchasing, but the manufacturers do not as yet encourage offers below their quotations.

SHELLAC.—Arrivals at London continue on a very extensive scale; the *Khedive*, which arrived this week from Calcutta, brought 981 chests shellac and 300 chests buttonlac. In Tuesday's public sales only 94 cases buttonlac (fourths) were offered and bought in at 39*s*. to 40*s*., bids of 36*s*. to 37*s*. per cwt. being declined. Privately there has been a better demand, it is said, with sales of *first orange* (H in diamond) at 60*s*., and unworked *second orange* at 44*s*. for cash. The Calcutta market, on April 19, was very dull, and in the absence of business of any consequence the quotations were mostly nominal. T.N. qualities being urged for sale were easier and would not bring over 10 rupees, but good marks were quite firmly held. In buttonlac no business whatever was reported. At the end of last week it is said T.N. second orange was sold for arrival at 46*s*. per cwt. landed terms, but holders refused to go on at that rate. On the spot 45*s*. to 46*s*. per cwt. is quoted to-day.

SODA.—*Asb* is very neglected, although nominally the prices remain the same, viz., 1½*d*. to 1¾*d*. per degree; *Bicarbonate* firm, at 7*l*. 5*s*. per ton. *Caustic* is quoted at slightly higher rates in the North, which have, however, had the effect of somewhat diminishing the volume of business transacted. On the London market our last quotations still prevail. *Crystals* show more firmness at 41*s*. to 41*s*. 6*d*. on the Tyne, and 45*s*. in London. *Nitrate* is reported to be again dearer at Liverpool, and very scarce.

SOY is still selling steadily at 1*s*. 4*d*. per gallon for good China.

SULPHUR.—The demand is rather slack, and prices quoted remain as follows: *Rolls* 7*s*. 6*d*. per cwt., and *Flowers* 9*s*. to 10*s*. per cwt. according to quality.

TAMARINDS.—Small sales of *West Indian* (Dominica) at 12*s*. 6*d*. per cwt.

TURMERIC.—In public sale on Tuesday about 250 bags were sold at 9*s*. for good bright yellow *Madras*, finger and bulb mixed; 8*s*. 6*d*. to 9*s*. for dull to bold *Malabar* finger; 7*s*. to 7*s*. 3*d*. for whole to split bulbs; 10*s*. 9*d*. for *Bengal* (offered without reserve); and 6*s*. 9*d*. for split *Cochin* bulbs. On April 19 the Calcutta market was easier, with an almost entire absence of demand, and a stock of about 4,000 maunds.

TURPENTINE has declined slightly, and is now held at 28*s*. to 28*s*. 3*d*. for *American* on the spot, 28*s*. 3*d*. for May, 27*s*. for June, and 26*s*. for September-December.

VANILLA.—The cultivation of this plant in Ceylon appears to be progressing very satisfactorily. We find it stated that one planter has up to date artificially fertilised no less than 3,000 flowers, and is now trying experiments with gum arabic and with ants in modes of fructification. This planter, some thirty years ago, was among the first in Ceylon to cultivate vanilla for the European market. Some pods then sent by him to Europe were sold at 105*s*. per lb. through Messrs. Baring Brothers. It would appear, however, that the culture of vanilla has never been taken up in earnest on a large scale, but at present, it seems, an energetic attempt is made to render the growing of the orchid a commercial success. In addition to the experiment above mentioned, ten acres of ground are being devoted to vanilla-growing at another Ceylon plantation.

THE AMERICAN MARKETS.

NEW YORK, April 29.

THERE is little to report this week; although the drug market is fairly active, no important change has occurred.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can therefore see at a glance the course of this market compared with their own.

BALSAM COPAIBA has rapidly advanced, and is likely to go higher; *Pará* is held at 45*c*. (2*s*.); *Maranhão* at 42*c*. (1*s*. 10*d*.); other varieties are not offering, stock being very small.

GUARANA continues to arrive in quantity; to-day \$1 (4*s*. 6*d*.) would be accepted.

OIL OF PEPPERMINT.—There has been an improved demand for bulk oils, and a good many inquiries for Hotchkiss, but the latter have not, so far, resulted in business, for holders here will not meet the low price ruling in London.

QUININE.—Owing to a disputed contract, 15,000 oz. Mannheim brand have been sold by public auction. The parcel brought 43*c*. (1*s*. 10½*d*. 5 per cent.) It is now reported a further lot will be offered soon.

ROOTS.—*Ipecacuanha* has again attracted attention, owing to the strenuous efforts of a firm here to corner the market. It is now thought that they have accomplished their object, and they are credited with carrying a stock of 40 bales here and 60 in London. The consumers here are reported to be fully supplied, and as the quarantine in the province of Matto Grosso may perhaps be raised soon, ample supplies may reach our market inside of two months. Here the market is nominally \$2 (9*s*.) *Senega* has sprung into active request again, and is at last tending higher; prime Western is quoted 37*c*. (1*s*. 10*d*.); ordinary, 35*c*. (1*s*. 9*d*.) *Jalap* is steady; no further arrivals took place since last report. *Serpentaria* in fair supply at 24*c*. (1*s*. 2*d*.)

SARSAPARILLA (HONDURAS).—During the week a considerable quantity of selected brands were taken for export, then a large local house stepped in and bought up what was left, so that none of the J.C.T., J.L. or Crown MC brands are left in first hands. They certainly have been ruling very cheap, and it is believed cannot pay the shippers.

THE GERMAN MARKET.

HAMBURG, May 10.

BUSINESS on the whole has been rather quiet, though moderate activity has been displayed in some lines.

The prices in this column are given in marks (11¼*d*.) per 100 kilos., or per kilo. (1 kilo.=2 lbs. 3½ oz.; 50¼ kilos.=1 cwt.). The prices in parentheses show the parity in London.

AGAR AGAR has declined to 2*m*. (9*d*. per lb.)

BALSAMS.—*Copaiba* is very firm with an upward tendency, and prices are held at 3.50*m*. to 3.60*m*. (1*s*. 8*d*.) No stocks exist in first hands. *Peruvian*.—A firm of speculators have entirely cleared out the stock in first hands, and consequently a better feeling prevails in the market, the quotations now being 10¼*m*. (4*s*. 9*d*.) *Tolu* quiet; small arrivals came to hand.

BARBS.—*Condurango* is still very scarce, and held at 3.25*m*. to 3.50*m*. (1*s*. 6*d*. to 1*s*. 7*d*.) *Quillaya* keeps arriving in considerable quantities both at Havre and at Hamburg, but prices are very firm.

CAMPOR.—The market for *refined* is weak, and very little is doing in the article.

ERGOT OF RYE.—Selling in a small way only, but remains steady in price. *Russian* is held at 2.40*m*. (1*s*. 1*d*.) *Spanish* at 2.30*m*. (1*s*.)

GUM ASPHALTUM.—All varieties are lifeless. Of the *Syrian* kind 100 cases were offered at higher rates.

GUARANA.—As the new crop is now arriving, second-hand holders have reduced their prices to 10*m*. (4*s*. 6*d*.)



The Proposed Monthly Drug Sales.

We have received the following letters from wholesale druggists and other firms whose interests would be affected by the suggested alterations in the drug sales:—

SIR,—We are in favour of monthly drug sales, but should like to see a meeting of all the interested parties called, at which the matter could be fully discussed.

Yours faithfully,
BURGOYNE, BURBIDGES, CYRIAX & FARRIES.

SIR,—We think on the whole it would be beneficial to the drug trade if sales were only held once a month. There might be a little inconvenience felt at first, but difficulties would soon right themselves, and, as dealers, we should certainly, have greater opportunities of disposing of our purchases between the sales.

On the other hand, it has been stated by one of the largest brokers that such an alteration would be prejudicial to the importers, and if this be the case we cannot expect the latter to rest contented.

We would suggest that the new system be tried, and if found wanting the old plan must be resumed.

If off-sales be frequent, the annoyance would be far greater than any inconvenience felt from fortnightly sales.

Yours obediently,
THOS. HODGKINSON, PRESTONS & KING.

SIR,—I have read with some interest the letter of a London drug broker in your issue of 7th inst., and feel convinced that your correspondent is correct in most of his views. I am strongly of opinion that the drug trade generally would benefit by the proposed change, and that the general demand would more than compensate for the slightly larger sales. It would also curtail the numerous lots of second-hand goods which are so frequently offered, and in many cases bought in, if the owners (who are generally present) cannot successfully "trot them up" to their limit. The percentage of goods sold in the series of sales does not average fifteen per cent., and in some cases not five per cent. of those offered in the catalogues, and I fail to see who benefits by such sales except the printer, for brokers cannot now charge for printing, &c., every time the goods are offered, but only once, and then only if sold. I doubt whether there are any good reasons why the sales should not be held monthly, *i.e.* every four weeks, and I shall be very glad to see the change made.

Yours truly,
MINCING LANE.

[The above is written by a broker of large experience in the drug market.]

A firm of wholesale druggists who, rightly or wrongly, are credited with being anxious to see the proposed alteration carried into effect, write that, inasmuch as they have given their word to the leading brokers in Mincing Lane that they would let the matter rest for a while, they are compelled for the present to remain silent on the subject.

Messrs. Barron, Harveys & Co. have not (as we were informed they had done) taken a great interest in the proposed alterations in the drug sales; nor have they made up their minds on the subject at present, and cannot therefore give reasons for or against the proposal.

A highly respected firm of wholesale druggists, whose opinion must carry great weight in any decision on the subject, but who wish to withhold their name, write as follows:—"We have not yet absolutely made up our minds as to the desirability or not of monthly drug sales, and we should like to have the question thrashed out well between the wholesale druggists. At present we rather disapprove of the proposal to have monthly drug sales; fortnightly ones

seem sufficiently long, taking now sometimes more than a day, and monthly ones would leave us for a long time without any really sound criterion as to absolute market values."

Messrs. Lewis & Peat write:—"We are not aware of any proposal for monthly drug sales. We are ready at our place of business, as has been our well-known practice for very many years past, to discuss with, and listen to, any responsible member of the trade on any point of interest to the drug trade, but decline to notice anonymous correspondents."

Messrs. August, Faber & Co. do not think it would be good policy to discuss the question of monthly drug sales through the medium of the press, as they consider it a matter which could and should be discussed by the trade at the fortnightly sales, if discussed it is to be.

Messrs. Schütte & Oldendorff decidedly disapprove of a change in the drug sales from fortnightly to monthly, because such an alteration would be injurious, not to say disastrous, to the London drug trade.

A firm well known in connection with the foreign drug trade give it as their opinion that the proposed monthly drug sales would be useful as far as the buyers are concerned; but, on the other hand, they doubt whether the importers would be inclined to put off the sale of their goods for a whole month, therefore they think it would be rather difficult to come to a mutual understanding in the matter.

Messrs. F. W. Bowyer & Bartleet have never had a drug sale but once a month, which they consider is sufficiently often for all the purposes of the trade.

Messrs. Jenkin & Phillips do not approve of the alteration of the drug sales from fortnightly to monthly, as they think it would be impracticable.

A London wholesale drug firm, having their headquarters outside the immediate neighbourhood of Mincing Lane, inform us that they would like to hear the question fully discussed by all concerned—*i.e.* druggists, brokers, and importers. Personally they would rather prefer monthly sales, as likely to curtail the troublesome work of inspecting goods and attending auctions; but they fear the change would not work, because the monthly sales would invariably take up two entire days or more, the parties in whose hands are the lots now offered for sale fortnightly would not care to wait a month before realising, and less frequent sales in London would give an advantage to competing Continental markets, of which they would not be slow to avail themselves. Besides, were the alteration once made, it would be difficult to recur to the old system, and the failure of other innovations, from which great advantages were expected (such as the alteration of the hour of meeting on 'Change'), does not encourage them to favour a change in the drug sale periods.

SIR,—In reply to yours of May 7, we beg to say that we must decline to express any opinion upon the subject of the drug auctions, firstly, because we object to take any notice of anonymous communications; and, secondly, because we do not think the pages of your journal the proper place to discuss a question of this nature, as it is of interest to many persons beyond the range of your general readers, and the subject has never yet been ventilated or brought under the notice of the trade in the proper quarter.

If your anonymous correspondent has the courage of his opinions, why does he not openly sign his name, that others may be able to judge whether his opinion is worth anything or not. We think that if you devoted more attention to the accuracy of your market reports, which are frequently glaringly incorrect, you would much more benefit your readers than by opening up a discussion on a subject in which the majority cannot be interested.

Yours obediently,
HALE & SON.

Pharmaceutical Nomenclature.

SIR,—In the list of Dr. Murray's *desiderata* I notice the words, "*camera* (photographic; previous to 1867)" and "*carrageen* (seaweed; previous to 1865)." The use of these words, at least, was common before the dates mentioned, and

I have no doubt some of your readers can say the same for one or two of the others. In the original specification of Fox & Malone (quoted by Hunt, "Manual of Photography," 1853, p. 30), the patentees claim "the obtaining by means of a camera, or copying-frame, photographic images or pictures upon slabs or plates of porcelain." Camera is often used in this sense throughout that work, and it also occurs in the "Camera Obscura" article of Cooley's "Cyclopædia" (1856). An illustration of the apparatus, very much as it appears to-day, is given by Price in his "Manual of Photographic Manipulation" (1858).

The Irish word *carrageen*, *carragheen*, or *carrageen* is commonly employed in the chief works on materia medica published during the past half-century, such as Christison, Pereira, Royle, Hooper and Grant, Gray and Redwood, &c. The former writer, for instance, remarks that *Chondrus crispus*, "now familiar in the shops under its Irish name of carrageen, has been strongly recommended as a nutritive and restorative article of food" (Christison, "Dispensatory," 1842, p. 453). Probably the first reference to carrageen will be found in the memoir of Todhunter, who introduced the article into medicine (Reece's *Monthly Gazette of Health*, January, 1831).

Philological pharmacists like Mr. Bell can no doubt assist Dr. Murray in the stupendous enterprise of his Society. One often, in referring to antiquated books on pharmacy, stumbles across archaisms like *dephlegmatic*, *edulcoration*, *caustion*, *reguline*, *long-neck*, *blind-head*, and a host of similar terms.

Your faithful servant,

143 New Bond Street, W. May 11.

J. E. SAUL.

Resina Podophylli.

In reference to the varying characteristics of podophyllum resin, mentioned by a correspondent in last week's issue, Mr. William Duncan, President of the Edinburgh Chemists' Assistants' Association, sends us the following note, which was read before that Association on April 13. We have also received a communication from Mr. J. F. Burnett on the subject, which we reserve for a future issue:—"While preparing tincture of podophyllin, many of you will have noticed that the commercial resins rarely answer to the characters given in the Pharmacopœia regarding solubility in rectified spirit. Possibly this partial insolubility may be caused by the resin undergoing some change in the precipitation, or in the drying (much in the same manner as extract of aloes), but this is not always the reason of its insolubility. The other day a sample of the resin was handed to me, which seemed to be more insoluble than usual. On making the tincture it was found that not more than 50 per cent. dissolved in spirits. The sample was of a greenish-yellow colour, and otherwise its outward appearance would have led one to think that it was a very good specimen. It, however, was only partially soluble in ammonia. On ignition, 27 per cent. of ash was left, which consisted of sulphate of alumina and potassium and traces of iron, proving that the B.P. process for preparing the resin had not been followed, but that alum had been used as a precipitant, and that the resin had not been carefully washed to rid it of this impurity. A friend informs me that some time ago he examined three samples, which were only sparingly soluble in spirit. They left 63, 81, and 83 per cent., respectively, of insoluble matter. The last one, on examination, was found to contain 26 per cent. of sulphate of sodium. This was believed to have been due to solution of soda being used for extracting the resin from the podophyllum, the resin being precipitated with sulphuric acid, and the product intentionally or unintentionally carelessly washed."

SIR,—I had the same experience as "W. A." last week, and procured two other samples, which I examined and compared with these results.

No. 1 was of a light yellow colour, probably American, and much adulterated with a kind of clay, it being nearly all soluble in water acidulated with hydrochloric acid; five-eighths was insoluble in S.V.R. (B.P. tincture strength). Ammonia was coloured by it, but did not dissolve any appreciable quantity; 325 per cent. of a greyish ash remained after incineration. On the application of heat, Nos. 2 and 3 changed to a thick black liquid, which caught fire, and over-ran cupel, but No. 1 remained in a powder all through, merely changing to black, and finally grey.

No. 2 had a dirty yellow appearance, was nearly all soluble in S.V.R. and ammonia. Owing to an accident I was unable to complete the incineration of this sample.

No. 3 was a rather dark brown powder, and came from a firm who guaranteed it to answer the B.P. tests. It was perfectly soluble in S.V.R., yielding a bright reddish brown tincture which did not require filtering, entirely soluble in ammonia, and 100 grains yielded only 0.56 of a grain of a light buff-coloured ash.

We hear of men being fined for selling aq. calcis not of B.P. strength. Chemists are surrounded by sufficient dangers already; yet a wholesale house sends out a drug in good faith which is adulterated to the extent of 62 per cent., thereby rendering the retailer liable.

Yours, &c.,

818 Holloway Road.

J. R. T. (99/15.)

SIR,—The recommendation made to your correspondent "W. A." in THE CHEMIST AND DRUGGIST of May 7, 1887, page 569, to determine the amount of ash in his samples of podophyllum resin, is a very wise one, and in this particular case a very necessary test to apply. Podophyllum resin, when prepared by means of alum water, may contain 1 per cent. of ash, but when prepared by the old B.P. method, or by the new one (without acid), it should not contain more than $\frac{1}{2}$ per cent. Commercial podophyllum resin has been stated to yield as much as 25 per cent. of ash; but results have from time to time been obtained by me which show that it may contain almost any amount of inorganic matter between 3 and 30 per cent. In some cases sulphate of sodium is largely present, and as this would not be present in podophyllum rhizome or rootlets in any great amount, we may conclude that it is not a normal constituent of the resin. The colour of podophyllum resin is not much to go by as a test of purity, because it depends on the mode of precipitation, the aggregation of the particles, the temperature at which the sample was dried, and also the length of time it has been prepared. Good podophyllum resin will dissolve almost (to within 2 per cent.) entirely in S.V.R., but some samples may leave 5, or even 10, per cent. undissolved. Sugar of milk and powdered rhizome have sometimes been detected. These, together with the sulphate of sodium, would diminish the solubility of the sample in the S.V.R. The results of W. A.'s examination of his samples, and especially of the ash (percentage and composition, &c.), might be recorded in your journal with advantage.

It may not be out of place to suggest that some limit should be placed on the amount of ash to be present in podophyllum resin, as is done in the case of kamala and lupulin. An extension of this kind of control would be very useful if it were more generally adopted in our Pharmacopœia.

Yours truly,

9 Broad Street Corner, Birmingham.

F. H. ALCOCK.

May 12.

Chemists' Responsibilities.

SIR,—I take off my hat with profound respect to "Mens Conscia Recti," and would not say a word against his heroic attitude. I, too, had once a lofty ideal. The position he takes up is unassailable, if his apprehension of my meaning is not quite accurate. Yet even he admits his customer failed to appreciate his nobility of soul, and if he lived in a rural district and repudiated local oracles it would be a meagre diet, and much to the joy of the general shopkeeper. It is a strange fact that three-fourths of the people of this country will rather believe the assertions of ignorance and mendacity than of culture and truth. He who devotes himself to educating humanity up to a higher level is undoubtedly a hero, whose reward is usually martyrdom of some sort plus his own approbation—not £ s. d., so necessary to the chemist and druggist. I hope I, too, have an honest mind, but if I cannot convince a fool of his folly my conscience is void of offence, even if I give a would-be suicide cream of tartar instead of arsenic when I know he may obtain the latter elsewhere. According to my lights, my conduct towards my customer and my conscience is

BONA FIDE.

P.S.—I may inform "M. C. R." the carter wanted the pills to cure himself, not his horses. In saying they would kill

his horses, my object was to impress his mind with their potency.

Election Dodging.

SIR,—In reference to a request from a Leicestershire association for support to a candidate from their district, some of the voters would prefer to be informed what proportion of chemists actually in business in that county are members of "the association," what number of persons comprise "the council" of the association, and in whose interest a surgeon's dispenser has been wriggled into the post of secretary to the association. I am, yours faithfully,

May 9.

LUKE INTUIT. (97/73.)

Chemists and the Pharmaceutical Society.

SIR,—It is positively sickening to see how persistently the Pharmaceutical Society seems to set its face against everything that is calculated to be of real benefit to the trade. Its conduct at the last meeting deserves, in my opinion, the censure of every chemist in the kingdom. The Brighton chemists (to their honour be it said) send an influentially signed petition, calling for the aid of the Society to amend the Pharmacy Act, and instead of meeting with the encouragement they deserved, they are told that it is "impossible to get the present Act altered" till a few score of persons get poisoned, or, as the president put it, "without strong reasons for it." Now, as the Society is responsible for the passing of the Act containing the monstrous flaw, to be honest and true to the interests of the trade, it should not rest until the Bill is amended, nor should the trade allow the Society to rest until it moves in the matter. Then, again, as to the Early Closing Bill, who commissioned the Pharmaceutical Society to oppose it in Parliament? According to the poll on the question taken by yourselves, sir, a great majority of chemists were undoubtedly of opinion that the Bill would confer a benefit upon them. I hope many towns will follow the example of Brighton and petition the Society, not only to get the flaw in its Pharmacy Act amended, but to bring itself more into touch with the great body of chemists in the country by attending, more than it has hitherto done, to their evident wishes and interests. I am sure the majority of chemists would place the amending of the flaw in the Act as the first duty of the Society, and relegate the Curriculum Bill to a back seat for the present.

Yours, &c.,

Manchester, May 10.

FIAT JUSTITIA. (98/6.)

DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

96/26. *Pills*.—Permanganate of Potash *Pills*.—The best excipient for these is Martindale's Kaolin Ointment, composed of 1 oz. each of vaseline, paraffin, and kaolin. Burgundy Pitch gives a most unsatisfactory pill. For each 3 grains use 1 grain each of phosphate of lime and liquorice powder.

Quinine Mixture.

SIR,—Your opinion or that of any of your numerous correspondents as to how the following should be dispensed would oblige:—

Quininae disulph. ..	...	...	...	...	3j.
Spt. ammon. co. ..	...	...	...	...	3iij.
Syr. zingib. ....	...	...	...	...	3vj.
Aq. chlorof. ad ..	...	...	...	...	3vj.

If the quinine be rubbed smooth in a mortar with aq. chlor., and the sp. ammon. co. added much diluted, as soon as bottled the quinine rises to the top, and cannot be diffused by violent shaking.

If an equivalent of pure quinine or the sulphate be rubbed up with the spirit and syrup, as soon as the water is added the same result is obtained. Yours truly,

PHOSPHATE. (97/64.)

[There are several courses open to the dispenser, such as (1) use an equivalent of pure quinine; rub it smooth with 3 oz. of chloroform water; add the syrup; then dilute the spirit with the rest of the water, and add it to the mixture. (2) Dispense the prescription as written, adding $\frac{1}{2}$ oz. of mucilage; or (3) use an aromatised spirit without ammonia, and add a quantity of sulphate of ammonia equivalent to the amount which will be formed by the reaction between the sulphate of quinine and ammonia.]

Glyc. Tragacanth in a Mixture.

SIR,—Neither of your correspondents has touched the real difficulty with reference to the prescription submitted by me. It is not in the *modus operandi* of combining the glyc. tragacanth, but in confining the result within the prescribed capacity of an 8-oz. bottle. Brisk effervescence takes place after the mixture has stood for a few minutes, and the question is whether the prescription is such as can be satisfactorily prepared. I prepared it with two different samples of cerii oxalate, but with the same result.

J. T. H. (98/70.)

Dialysed Iron Mixture.

SIR,—I have mixed the above, using various makes of vin. pepsinae and liq. ferri dialysat. All separated without exception.

Yours truly,

D. T. E. (98/72.)

SIR,—I dispensed two mixtures—one with aq. dest., the other with aqua. After standing four days, I get no separation in either.

Yours, &c.,

DOLOR. (100/11.)

LEGAL QUERIES.

73/96. *J. S.*—As shown last week, the distinctions drawn by the Board of Inland Revenue in reference to corn applications, are very subtle, and we cannot tell whether your label would render the preparation liable. We should think it would; but your proper course is to ask the Board, sending labels in duplicate.

42/96. *J. K.*—You must really take your chance with your hop tonic label. Put up in the way you suggest we do not see what rights you would infringe, but bear in mind that nothing has yet been declared on the subject by any court, and as the question is now in course of being tried, it would be ridiculous for us to give opinions based on such scraps of evidence as have yet been published.

8/97. *F. W.*—It is legal to sell belladonna, or its preparations, to a person unknown to the seller. It is only (legally) necessary to label it with the name of the article, the word "poison," and the name and address of the seller; or if dispensed, to label the medicine with the name and address of the seller, and to record in a book, kept for that purpose, the ingredients of the preparation and the name of the person to whom it is sold or delivered.

37/98. *Cautious.*—We are not able to give you an authoritative reply concerning your corn-solvent label. Write to the Board of Inland Revenue.

95/19. *S. W. H.* states that he has a demand for Spt. Aether Nit. for cattle, and usually supplies an article of sp. gr. 0.900. He would like to know if he is liable for selling this article; also, if allowed to be sold, does it require to be labelled in any special manner?

[The decisions of the Courts so far amount to this, that the spirit of sp. gr. 0.850 (that is, the London Pharmacopœia spirit) may be sold for sweet spirit of nitre, and the official spirit of sp. gr. 0.845 may only be sold for spirit of nitrous ether. The spirit sp. gr. 0.900 is neither "spirit of nitrous ether" nor "sweet spirit of nitre," and may be sold, but only

as "a mixture of spirit of nitre and water," or something to the same effect.]

21/99. *Vectio*.—It is not legal for a Minor man to describe himself as a "pharmacist," nor as a "consulting pharmacist."

MISCELLANEOUS INQUIRIES.

93/48. *W.*—**Salve Sticks**.—The sample which you send contains pitch, and this is probably the active ingredient. Try the following formula:—

	Oz.
Resin	6
Black pitch	6
Cocoa butter.. .. .	1
Lard	3

Melt over a gas-flame, allowing the mixture to be heated for a few minutes afterwards, then pour into a dish of cold water, knead with the hands, and as soon as the mass is cool enough to handle remove from the water and work until tough; then form into sticks.

94/10. *Bos*.—Your lavender water requires the addition of a little musk to cover the slight empyruma of the oil, which is probably somewhat new. But if you allow it to stand for a few months you will find it all that you can desire.

7/217. *W. D.*—**Hæmatoxylin**.—This you can prepare by mixing logwood extract with its own weight of sand, and digesting in 5 parts of methylated ether for three or four days. Filter, distil off the ether, and evaporate to a syrupy consistence. Mix this with water, and set aside to crystallise.

Books.

7/217 *W. O.*—Richardson and Watts's "Chemical Technology" and Ure's "Dictionary of Arts and Manufactures" are works which would suit, but both are expensive. You may get a cheap copy of either by advertising in the Exchange column. Payen's "Industrial Chemistry" (Longmans, 42s.) is also a useful and a smaller work.

95/5. *Chemicus*.—**Botany Books for the Minor**.—Bentley's "Structural and Physiological Botany" (Churchill, 7s. 6d.); Silver's "Botany" (Renshaw, 6s.); or Balfour's "Elementary Botany" (Black, 3s. 6d.). These are amongst the books used by pharmaceutical students.

94/45. *Dentist*.—**Mechanical Dentistry**.—Cole's "Manual" (Churchill, 7s. 6d.); and Hunter's "Mechanical Dentistry" (Crosby Lockwood, 7s. 6d.).

57/93. *W. W.*—We have not seen the work which you mention, but understand that it is no way superior to "Sachs" or the "Micrographic Dictionary."

34/79. *Rivilo*.—You will observe from our advertisement pages that a ketchup may be obtained which you can sell at 6d. a pint and have a good profit. We have given formulas for cheap sauces lately. Please consult back numbers.

81/31. *F. S. Evens*.—**Gold-beater's Skin** is prepared from the peritoneal membrane of the cæcum of the ox and coated with isinglass.

93/74. *Koko*.—**Crystoleum Painting**.—The medium is composed of equal parts of Canada balsam and castor oil. The varnish is pale copal varnish thinned with turpentine.

Heald's Remedies.—*Mr. A. J. Heald*, Burnham, writes in reference to an inquiry about the composition of these:—"I am afraid your correspondent who inquires for the 'composition of Heald's Remedies' has not given sufficient thought as to what is implied by his question. One of two things—either idle curiosity, or a desire to invade and, if possible,

appropriate the property of another. Of the two I prefer to credit him with the first, but neither is commendable.

[We are bound to record our protest against Mr. Heald's theory, as his censure applies as much to us who printed the inquiry as to the correspondent who sent it. We invariably try to keep in view the fair rights of proprietors and inventors, but we consider that both the public who consume and the chemists who sell secret remedies are perfectly justified in making whatever investigation they please into the composition thereof. Proprietors ought to accept such inquiries as complimentary, as it generally indicates a satisfactory experience with the article in question.]

91/48. *J. W. R. Canton*.—Please let us know the kind of syrups you require. We have given formulæ for the more popular ones, for instance—in reply to "The Pill Box," April 16, p. 488.

55/91. *G. Bird*.—**Depilatory**.—Orpiment, 1 part; starch and quicklime, of each 12 parts. All in fine powder, and mixed.

Black Hair Dye.—Nitrate of silver, 5iv.; sodium carbonate, 5vj. Dissolve each in 8 oz. of boiling water, mix, collect the precipitate, wash it, and drain. Place in a mortar along with 80 grains tartaric acid, stir, and when effervescence ceases, dissolve in solution of ammonia q.s., add 5ij. each glycerine and mucilage, a little caramel or archil to colour, and water to 5 oz.

Brown Hair Dye.—Pyrogallie acid, 3ss.; sodium sulphate, 5ss.; rectified spirit, 3j.; water, 3iij. Dissolve the acid in the spirit, the sulphate in the water, and mix.

94/22. *A Subscriber*.—Please read a medical work. We cannot undertake to give medical advice.

95/10. *Cucumber*.—You should add a little more perfume, or say 5 drops of otto of rose or oil of ylang-ylang, dissolved in spirit. The latter would be the better.

Corn Cure.—Ext. cannab. ind., gr. viij.; acid salicylic, gr. 60; collod. flexil., 5vj.; ether, 5ij. Dissolve and mix. This is the popular cure.

92/17. *J. B.* wishes to get a few hints upon marine aquaria. Would someone skilled in the matter oblige him?

36/94. *Poacher*.—**Paint for Black Eyes**.—A mixture of bismuth two parts and talc one part, coloured with Armenian bole or calamine to the skin-tint. Apply to the part dry, but it should previously be washed with a mixture of glycerine 1 part and water 5 parts.

Mr. T. W. Mason writes to say that Santonin is by no means the new remedy for gleet that our remark last week would appear to indicate. It has been used by botanists and eclectics in this country in urinary complaints for many years, and in 1870 Dr. Scudder specially advocated its use in these complaints.

94/52. *E. F. Williamson*.—**Teething Powders**.—(1) Pulv. antimonalis, gr. $\frac{1}{2}$; calomelanos, gr. $\frac{1}{2}$; sacch. alb. pulv., gr. ij. M. (2) Hydrarg. c. cretâ, gr. j; pulv. scammon. co., gr. j; sacch. alb. pulv., gr. iij. Each for a child of one year. The first is the kind generally sold.

S. C.—**Pasma Powder** is composed of French chalk and rice starch, of each equal parts.

29/89. *Jubilee*.—**Horse Tice**, or Entice, is generally composed of an equal mixture of ol. anisi and ol. rhodii. To catch colts, this mixture is rubbed into the hands or upon the coat-sleeve. Restive horses are sometimes rendered quiet by smearing the bit with it. It does not answer equally well with all individuals, as some persons have an influence over horses which they cannot themselves ascribe to drugs.

22/90. *Foot-rot Lotion*.—We do not know the "Warwickshire Foot-rot Lotion." We have a special article on foot-rot treatment awaiting insertion. Meanwhile, as a general lotion, we recommend—Sulphate of copper, 1 oz.; water, 6 oz.; dilute sulphuric acid, 1 drachm. But success depends largely on the precautions in application, &c.

Referring to "J. G. H.'s" query *re* dental plate and unpleasant taste, *L. D. S.* writes:—"If the person referred to had a vulcanite plate a great deal of the unpleasant smell and taste is due to the action of the acids of the stomach acting on the plate and liberating a sulphide. The amount and length of time such unpleasantness will continue is due to the amount of sulphur used in the manufacture of the vulcanite and the amount of acidity arising from the stomach. Some patients get little or no unpleasant taste or smell from vulcanite plates, while others are very objectionably reminded of their teeth. The choice of material (metal or vulcanite) for mounting teeth is one important matter the dentist should look to if he wishes to give satisfaction. The characteristic smell of decayed teeth is decidedly phosphorescent, and if the objection arises from decay the best remedy is the extraction of the decayed stumps; but if sulphurescent, saline aperients and carbofic mouth washes."

38/93. *Subscriber* (London).—We cannot adopt your suggestion.

10/93. *Ephmera*.—By having on your stand with the seltzogene a fair variety of syrups (ginger, lemon, raspberry, orange, &c.) in elegant bottles, always kept scrupulously clean, you will add to the attraction of that department, and be in a position to supply in the most perfect manner, as far as flavour goes, beverages adapted to different tastes.

5/93. *Wills*.—If the *Tinct. Opii Aquos.*, made according to the formula given on December 4 last, does not keep, use more glycerine.

93/7. *J. T. H.*—*Pomade Hongroise*.—White wax, 2 oz.; white castile soap, 1 oz.; gum arabic, 1 oz.; rose-water, 2 oz.; perfume, q.s. Dissolve the gum and soap in the water by a gentle heat, and, having previously melted the wax, stir it into the soap mixture, and add any suitable perfume. Colour it black with fine drop black, and brown with burnt umber or caramel. This correspondent says, "We are much indebted to you for the recipe you gave for hair lotion some time ago; it makes a capital preparation, and sells well."

21/92. *N. B.*—See reply to "H. S." (90/72), page 544. We have already published a number of recipes, and will give more in the course of a few weeks.

91/71. *Leyton*.—We do not know the composition of Beecham's pills.

66/91. *Indagator*.—It is obvious that the sugar crystallises out of the syrup because there is insufficient water to keep it in solution. Add more water, and read the article on syrups in the "Art of Pharmacy."

49/92. *Mel Boracis*.—No Preliminary examination is required for the Apothecaries' Hall assistants' certificate. The books which you name would be servicable. For particulars apply to the secretary, Apothecaries' Hall, Blackfriars, E.C.

Ribbon of Bruges.—Dissolve 1 oz. of nitrate of potash in 16 oz. of water, and in this solution dip narrow tape, which is afterwards to be dried. Make a scenting tincture from the following:—Benzoin, 3j.; musk, 10 grains; myrrh, 3ij.; tolu balsam, 3ij.; orris root, 3j.; otto rose, mx.; rectified spirit, 3x. Digest for a week and filter. Give the nitrified tape two immersions in this tincture.

93/71. *Crucible*.—The formula for Parrish's Syrup is quoted in the "Art of Pharmacy," where you will notice it is stated that the precipitates must be washed. Martindale's or Mr. H. W. Jones's formula is also given in the "Art of Pharmacy." No one can say what may and what may not be sold for Parrish's Syrup, for the formula which he originally gave did not yield a preparation of the strength he indicated. Gold Labels are best affixed to bottles by means of ordinary flour-paste. Varnish them with white shellac varnish.

24/93. *Apprentice*.—*Theatrical Varnish* (for affixing moustachios).—Resin, 5j.; castor-oil, 5ij.; methylated spirit, 5iv. Dissolve, strain, and perfume.

97/68. *Rhizoma*.—You will find information regarding Cuticura remedies in our issue of March 19, p. 371.

95/17. *R. Smith* (Peckham) wishes to learn of a process of tattooing less painful than the ordinary method of pricking in.

95/30. *Puzzled One*.—*Minor Examination*.—If you have bicarbonate of sodium or nitrate of potassium given you by the chemistry examiner, you are expected to prove the presence of the acid as well as the base; but if the chemicals are given in solution (which is rarely the case), you are not required to ascertain the quantity in solution, although it is possible that the examiner might ask you how you would ascertain—the process being a very simple one.

95/44. *NH*, asks:—"What is the best flavouring agent to cover the taste of a mixture containing 15-grain doses of sodii salicylas and 15-minim doses of liq. sodæ chloratæ?" [Extract of liquorice is effective in covering the taste of the salicylate, and should be tried in this case.]

95/46. *Tiro*.—*Bell Scholarship Examination*.—(1) The calendar of the Pharmaceutical Society for 1887 contains the questions which were given last year. (2) Roscoe's "Elementary Chemistry," in conjunction with the British Pharmacopœia, will give you all the information required, but you will find Attfield's book better, as the questions are on pharmaceutical chemistry. (3) Bentley's "Elementary Botany" is sufficient. (4) The pharmacy questions are so general, that you will have to master the British Pharmacopœia pretty thoroughly. In this study you will find Procter's "Lectures" of considerable assistance.

95/59. *Alpha*.—According to Dorvault, *Holloway's Pills* have the following composition:—Aloes, 3j.; rhubarb, gr. xxv.; pepper, gr. xii.; saffron and Glauber's salts, of each, gr. ij. Mix and divide into 144 pills. Hager, on the other hand, states that 1,000 of the pills contain aloes, 40 grm.; rhubarb, 20 grm.; cinnamon and cardamoms, of each, 5 grm.; saffron, 2·5 grm.; Glauber's salts, 5 grm.; sulphate of potash, 10 grm. Made into a mass with confection of roses. We do not know the composition of Beecham's Pills.

95/38. *C. E. L.*—*Ringworm of the Scalp*.—The hair should be cut out. Paint a ring round the circumference of the affected part with solution of nitrate of silver (20 grains to the oz.), then treat with chrysarobin ointment. If that fails, try solution of sulphate of iron (3j. to 5j. with 10m of acid. sulph. dil. added).

7/217. *W. D.*—Chrome iron ore is not obtainable in London. Glasgow is the place where the ore is most worked. Consult Muspratt's "Chemistry" (new edition) regarding the processes for working the ore.

93/59. *Student*.—A good *Silvering Fluid* is made as follows:—Dissolve 1 oz. fine silver in dilute nitric acid (1 in 3); evaporate and crystallise; dissolve in 3 pints of water; add a solution of 2 oz. potassium iodide in $\frac{1}{2}$ pint of water by

degrees, until no fresh precipitate appears on the addition of a fresh drop of iodide; wash the precipitate repeatedly, and dissolve it in a strong solution of potassium cyanide in hot water, added gradually with stirring. When nearly all the iodide is dissolved allow the vessel to stand at rest for a few hours, pour off the clear solution and treat the undissolved iodide with fresh cyanide solution, taking care to avoid excess of the latter. Make up the solution to 1 gallon by adding water, and leave it for a few days before working. Chains, lockets, and similar small articles should be thoroughly cleansed before immersion in a bath of this solution. To do this immerse in succession in alkali, water, dilute acid and water; then place in a perforated ladle of stoneware or porcelain, or suspend on copper hooks attached to a battery.

6/95. *J. C. Brewer.*—Soot is a favourite dressing for gardens to preserve plants from slugs, wire-worms, &c. Gas-lime is the favourite dressing with many gardeners, but it must be used with caution, as it is dangerous to plant life. It may be applied as a top dressing in the autumn.

96/41. *Roborans.*—Boracic acid with a little borax is said to represent Glacialine. Inseparable Brilliantine.—Castor oil, 5ss.; absolute alcohol, 3j.; otto of rose and oil of neroli, of each, gtt. ij. Mix. May be coloured pale green or yellow, and any other perfume may be used, but it must be strong to cover the objectionable odour of the castor oil.

93/51. *Bookworm.*—Solution of ammonia intensifies the colour of faded writing-ink for a short time, and is the safest thing to use.

96/43. *J. W. B.*—Mayer's Reagent contains 6775 grm. of mercuric chloride, and 25 grm. of potassium iodide in 1 litre of distilled water. You will get information regarding the different reactions of alkaloids, glucosides, and albumenoids in Attfield's "Chemistry," or Dragendorff's "Plant Analysis" (Greenish's translation). Glycerole plumbi should be water-white.

94/66. *Molar.*—Cocaine in Dentistry.—As much as 1 grain of cocaine is injected into the gums for tooth extraction, and there is no doubt that although it is highly successful in many cases, there are others in which alarming symptoms of poisoning have resulted. You have the chance of meeting with some cases of the latter, and if so, the consequences might be serious to you. *J. C.* (95/12) also writes on this subject. Amongst other things he says: "I am successful in some cases, and others are a complete failure. Is cocaine, when injected by hypodermic syringe into the gums, liable to produce paralysis in patients predisposed that way?" To this we only say that failure in some cases and success in others is a common experience, and that the solution frequently produces such symptoms that if a patient inclined to paralysis is to be operated on, the cocaine should only be used in the presence of a medical man.

41/221. *W. Robinson.*—Syrup of Morphia.—Solution of acetate of morphia, 5j.; simple syrup, 3xv.

220/41. *W. Matthews.*—The aniseed cordial for which we gave a formula is a stimulating beverage, and is not suitable for infants. 56° o.p. spirit is intended.

221/9. *J. M. (Paris).*—Syrupus Ferri et Quininae Brom. Hydratis.—We gave directions for making this syrup in the "Art of Pharmacy." The following is the formula:—

Bromine	1 oz. and 110 grains
Fine iron wire	½ oz.
Distilled water	4 oz.

Place the iron wire and the water in a flask, and add the bromine gradually and with constant agitation. When all bromine colour has dis-

appeared boil the contents of the flask and filter (the filtrate should be of a grass-green colour).

Quinine sulphate	160 grains
Dilute hydrobromic acid	q.s.

Dissolve the quinine in 2 oz. of water, with the aid of a little sulphuric acid, precipitate carefully with ammonia solution, collect, wash, and dissolve in the hydrobromic acid, and mix with the iron solution. The mixed solutions should measure 3 oz., and are to be added to 17 oz. of thick simple syrup.

221/27. *Grain Musk.*—We have got the best results by the following method:—Mix the musk with its own weight of liq. ammon. fort. and cover up for ten minutes; then add two drachms of boiling water for each grain of musk, digest for three hours, then add the spirit.

96/40. *R. J. W.*—Freshly-made nitro-hydrochloric acid sufficiently diluted is the best thing for removing black aniline stains from linen.

97/15. *L. A. H.*—Belladonna Liniment is used for stopping the milk. St. John Long's Liniment.—The following formula is said to give a preparation resembling this:—Oil of turpentine, 3ij.; acetic acid, 5v.; rose-water, 5iiss.; essence of lemons, 3iv.; yolk of one egg. Beat up the yolk in a mortar with an ounce of rose-water, add the turpentine and essence of lemon, mix the acetic acid with the remainder of the rose-water, and gradually incorporate with the emulsion.

96/52. *Enquirer (Leicester).*—You will find full directions regarding the manufacture of granulated preparations in the "Art of Pharmacy." The following is the formula therein given for Citrate of Magnesia:—

Bicarbonate of soda	17 oz.
Tartaric acid	13 "
Citric acid	2 "
Sulphate of magnesium (dried)	1 "
Sugar	1½ lb.

Mix, and place the powder in an enamelled iron dish, carefully heat over a Fletcher's furnace, constantly stirring until the mass is pasty, then press through a wire sieve with sufficient size mesh, and dry the granules in a warm room. Another good plan is to get a large photographer's developing dish, made of earthenware, and get this jacketed so that a current of steam may be passed through it. With this dish all that is necessary is to heat the powder, stirring assiduously until granules are formed.

98/72. *D. T. E.*—Silver Bronze.—We presume that you mean "Minargent"—an imitation of silver—which is made as follows:—

	Parts
Copper	1,000
Nickel	700
Antimony	50

Melt together, and granulate by pouring into water. Agate fuse with aluminium (10 parts), and 1½ per cent. of a flux composed of 2 parts borax, and 1 part fluorspar.

98/4. *Druggist.*—Madras Wax is a beeswax bleached in India. It is imported in thick slabs, and is principally used in candle-making. Any wholesale house should supply it.

93/59. *Jubilee.*—Brilliantine.—Almond oil, 5j.; rectified spirit, 3ij.; otto of rose or other perfume, q.s.

92/13. *Gelatine.*—We cannot account for the separation; it is probably due to electrolytic action.

93/29. *J. Hall.*—See page 488 of our issue of April 16.

97/62. *C. E. L.*—The solution of plumbate of soda should be used, but we have no experience of the process.

98/48. *Spt. Vini Gall.*—"A cask of brandy (ten years old) has become very dark in colour, caused by some nails protruding into the spirit, the iron and the astringent matter of the wood accounting for the dark colour. Can you suggest a means of clarifying? A wine merchant informs me that he uses for this purpose an article in daily use in every house, but would not inform me what it was." [Gelatine or isinglass is used in such cases.]

Wanted.—A ready method of distinguishing between **Cane and Beetroot Sugar**. [Beetroot sugar reduces Fehling's solution more readily, and generally contains more ash. Experts can also detect an objectionable odour in beetroot sugar.]

97/69. *J. H. Wilson.*—**Barometre Universelle.**—The colouring used in this is a solution of chloride of cobalt and common salt, with a little mucilage. Any fabric saturated with this, when perfectly dry, is of a blue colour. When the air becomes very moist the fabric is red, and between the dry and moist conditions of the atmosphere various tints between red and blue are produced.

35/94. *Chemicus.*—The pharmaceutical qualification in Cape Colony (and similar arrangements prevail, we believe, in the other South African colonies) is granted by the Medical Board. The English Minor certificate and a fee of 50s. is accepted in lieu of examination.

5/190. *Fritz.*—We cannot advise in medical matters.

Information Wanted.

[Replies to the following requests are solicited by Correspondents of THE CHEMIST AND DRUGGIST.]

45/78. Painter's "Terebene." How made?

96/7. Palm-nut meal in quantities of, say, 1 cwt. and price.

99/1. Name of a firm which supplies camphor pilules in bulk.

LAST MONTH'S TRADE STATISTICS.

THE Board of Trade Returns for April show the following figures:—

Imports.

	April, 1886	April, 1887
Total value	£26,063,754	£31,149,925

Exports.

	April, 1886	April, 1887
British and Irish produce ..	£16,417,804	£16,411,662
Foreign and colonial produce (partly estimated) ..	5,168,697	5,743,339

Below are the details affecting drugs and chemicals:—

Imports.

	Apr., 1885	Apr., 1886	Apr., 1887
Drugs, unenumerated .. value £	68,506	61,595	52,629
Chemical manufactures and Products, unenumerated .. value £	126,317	124,437	107,614
Alkali cwt.	3,501	5,878	5,680
.. .. value £	3,721	4,482	3,519
Brimstone cwt.	55,400	58,899	69,220
.. .. value £	15,686	14,755	15,967
Nitre (nitrate of soda) .. cwt.	242,314	202,613	142,800
.. .. value £	118,419	110,815	25,000
" (nitrate of potash) .. cwt.	29,069	26,105	30,947
.. .. value £	25,048	22,331	27,089
Quicksilver lbs.	24,675	452,700	881,400
.. .. value £	1,850	36,264	83,300
Bark, Cinchona cwt.	11,043	16,748	13,375
.. .. value £	70,337	95,032	69,213
Gum Arabic cwt.	8,212	3,771	2,394
.. .. value £	26,899	11,242	11,837
Lac, seed, shell, stick, and dye .. cwt.	13,548	11,396	11,192
.. .. value £	45,742	34,394	28,570
Spices— lbs.	182,334	154,718	82,226
.. .. value £	5,052	6,230	3,431

Imports—continued.

	Apr., 1885	Apr., 1886	Apr., 1887
Spices (continued)—			
Ginger cwt.	12,229	9,709	13,435
.. .. value £	24,394	21,092	27,706
Pepper lbs.	2,398,238	1,541,641	2,211,842
.. .. value £	75,024	43,148	65,125
Dyes and tanning materials—			
Bark (for tanners' or dyers' use) cwt.	20,489	31,319	38,645
.. .. value £	9,278	15,149	17,191
Aniline dyes "	20,160	21,127	18,289
Alizarine "	16,759	24,935	20,188
Other coal-tar dyes "	561	360	585
Cochineal cwt.	949	1,031	701
.. .. value £	5,710	6,745	4,253
Cutch and gambier tons	3,552	1,483	1,661
.. .. value £	75,543	37,337	41,163
Indigo cwt.	10,869	4,831	6,101
.. .. value £	216,363	55,026	97,192
Madder, madder root, garancine, and munjeet cwt.	1,493	1,417	553
.. .. value £	2,430	1,848	727
Valonia tons	2,734	4,624	3,882
.. .. value £	43,544	63,802	54,133
Oils—			
Cocoa-nut cwt.	16,412	16,822	13,745
.. .. value £	24,598	23,627	20,036
Olive tons	2,629	1,487	1,855
.. .. value £	109,669	60,237	67,487
Palm cwt.	48,217	69,716	62,816
.. .. value £	70,112	69,613	60,916
Petroleum gals.	4,549,891	3,178,015	4,695,104
.. .. value £	144,293	83,722	150,777
Seed, of all kinds tons	935	1,488	977
.. .. value £	27,319	34,555	22,013
Train, blubber, and sperm tons	609	488	797
.. .. value £	19,640	13,038	19,848
Turpentine cwt.	2,885	5,697	11,435
.. .. value £	2,977	7,195	15,246
Rosin cwt.	131,690	62,825	117,021
.. .. value £	28,343	10,414	25,237
Tallow and stearine cwt.	105,437	33,258	88,211
.. .. value £	170,520	44,349	103,770

Exports.

	Apr., 1885	Apr., 1886	Apr., 1887
British and Irish produce—			
Alkali cwt.	611,179	518,108	526,983
.. .. value £	170,024	142,260	150,316
Bleaching materials cwt.	127,002	130,105	122,425
.. .. value £	42,150	37,616	46,234
Chemical manure value £	131,591	132,153	100,459
Drugs and medicinal preparations (unenumerated) .. "	63,981	53,780	62,784
Other chemicals and medicinal preparations "	153,211	154,366	162,826
Oil, seed tons	4,471	7,225	6,799
.. .. value £	105,053	150,907	141,477
Soap cwt.	33,731	38,695	35,502
.. .. value £	39,921	40,462	35,314
Painters' colours and materials (unenumerated) .. value £	102,738	104,078	106,534
Foreign and Colonial merchandise—			
Bark, Cinchona cwt.	3,635	9,929	14,950
.. .. value £	18,982	46,611	58,084
Chemicals (unenumerated) .. "	20,023	7,513	24,391
Cochineal cwt.	769	1,689	714
.. .. value £	5,159	6,972	4,627
Cutch and gambier tons	676	859	834
.. .. value £	14,780	21,296	22,076
Gum Arabic cwt.	5,777	2,852	2,801
.. .. value £	22,064	10,690	9,918
Indigo cwt.	13,012	5,199	7,437
.. .. value £	304,656	101,906	164,541
Lac (various kinds) cwt.	7,293	7,005	5,021
.. .. value £	24,525	21,110	13,657
Lard cwt.	2,280	3,456	507
.. .. value £	5,153	6,528	925
Oils, cocoa-nut cwt.	6,423	10,670	10,060
.. .. value £	9,632	15,077	14,570
" olive tons	385	232	312
.. .. value £	13,754	10,018	12,282
" palm cwt.	20,195	50,598	39,871
.. .. value £	28,661	51,033	38,350
" petroleum gals.	490,676	45,806	29,201
.. .. value £	11,049	2,150	1,197
Quicksilver lbs.	223,739	652,834	476,783
.. .. value £	17,580	50,513	43,590
Nitre (nitrate of potash) .. cwt.	1,723	2,158	6,223
.. .. value £	1,432	2,242	5,101
Spices, cinnamon lbs.	75,276	121,154	51,703
.. .. value £	2,677	4,065	2,042
" pepper lbs.	1,048,887	1,629,777	1,721,900
.. .. value £	33,285	49,633	50,381
Tallow and stearine cwt.	21,914	20,644	17,879
.. .. value £	21,592	22,404	20,838

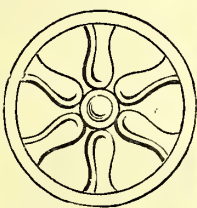
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SPECIALLY PREPARED FOR PHARMACEUTICAL PURPOSES.

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BEST QUALITY

WHITE WILLOW BOXES.

AGENT FOR THE BEST CONTINENTAL MANUFACTURERS OF

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THERMOMETERS, LACTOMETERS,
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MEDICINAL CAPSULES, PERLES, &c**MENTHOL CONES, &c.****HENRY'S CALCINED MAGNESIA**

Continues to be prepared with scrupulous care in the greatest chemical purity, by

Messrs. THOMAS & WILLIAM HENRY, 11 East Street, St. Peter's, Manchester,

And is sold in bottles, authenticated by a Government Stamp bearing their Names and Trade Mark, "Henry's Calcined Magnesia."

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Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.
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From the time Medicine was first discovered by the Ancients down to the present none ever made such progress as

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They stand without a rival, and have by far the largest sale of any Patent Medicine in the World. This is a fact which every business man is bound to admit.

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The health-restoring and life-giving properties of these Pills are such as to increase their demand every year.

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Prepared only and sold by the Proprietor, **THOMAS BEECHAM,**
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OVoid CAPSULED PILLS

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ABSOLUTELY PURE PROTO-IODIDE OF MERCURY should be a bright yellow impalpable powder, entirely free from globules of mercury or particles of bin-iodide.

The title "Viride" should be discarded, and "Flavum" substituted as a correct description of the chemically pure product of precipitation found in the "McK. & R." Pills containing 1-8 and 1-4 grain.

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Bottles containing 25 Pills each, 5s. per dozen; 100 Pills each, 16s. per dozen.

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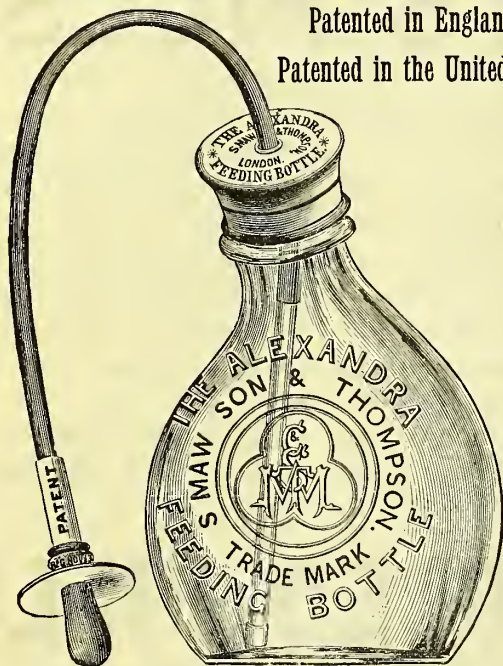
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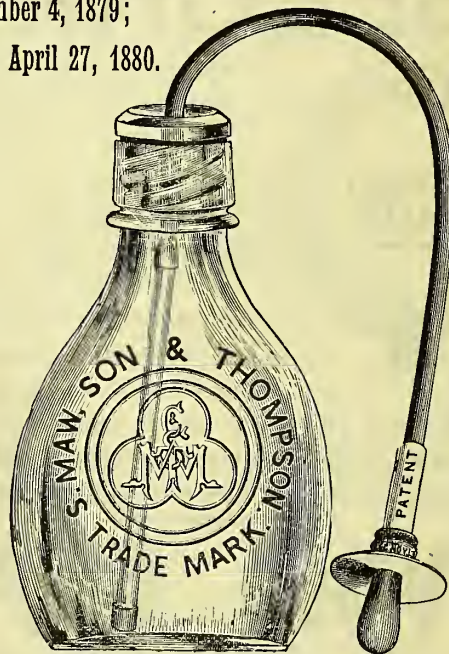
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	White Fittings.			Black Fittings.		
Alexandra, China or Wood Top Corks ... per doz.	3/8	—	—	4/3	—	—
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Alexandra, Glass Screw Stoppers	4/-	8/-	11/-	4/6	8/6	12/-
Export, China or Wood Top Corks	3/6	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks ...	2/9	—	—	3/3	—	—
Export, Earthenware Caps	—	7/3	—	—	8/-	—
Export, Glass Screw Stoppers	4/-	7/6	—	4/6	8/-	—

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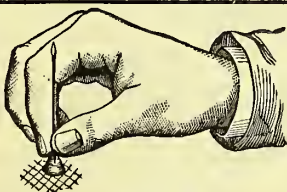
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SYR. HYPOPHOSPH. COMP.

Is the STRONGEST and MOST ELEGANT Syrup
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ONLY CHEMISTS ARE SUPPLIED.

It contains in each fluid drachm—

Hypophosphite of Lime	1 gr.
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" " Iron (Protoxide).....	1 gr.
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SLIGHTLY ALKALINE.

The composition may be varied to suit buyers. Diluted with
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It is, we believe, superior to the imported or any other Colourings. Gives a splendid Golden Colour to Pomades, Ointments, &c. Send for Samples and Prices before ordering elsewhere.

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Retail, 1, 1/9, & 3/6; Wholesale, 7/1, 12/, & 22/6 per doz.
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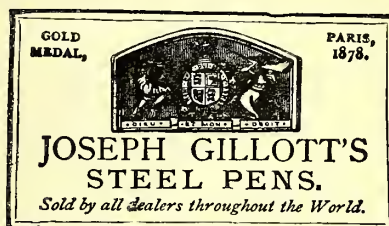
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(IN CAPSULES.)

The nauseous taste of this drug is effectually covered by enclosing a Concentrated Fluid Extract in Gelatine.

The boxes contain 24 Capsules in each, are neatly got up, and of a convenient size and shape for the pocket.

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1 PINT.	5 PINT.	10 PINT.
Each 3/0	5/6	9/6

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They are not surpassed in quality by any maker, and give entire satisfaction.

MEDICATED AND HIGH-CLASS LOZENGES, OF EVERY KIND, sent out in 2-lb. or 4-lb. Bottles, Bottles Free; or in Tins, from 10-lb. upwards.
Lime Juice Tablets, Malt Tablets, Acid Drops, and Best Quality Boiled Sugars of every kind
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PENNY SUGAR WORM CAKES, suitable for either children or adults. Have an immense sale, keep in any climate, and please everybody. Manufactured by
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Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

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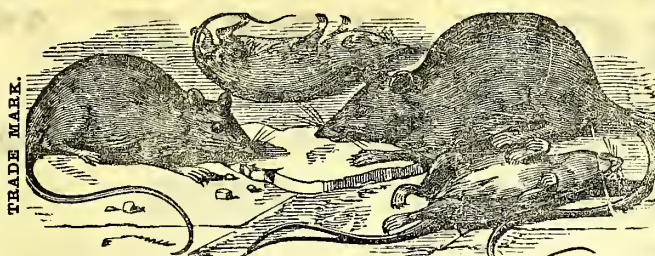
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ONLY GOLD MEDAL

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GEO. WATERSTON & SONS,
LONDON AND EDINBURGH.

BATTLE'S VERMIN KILLER. { Mice eat it readily and
Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—*Thousands might be published.*

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURRY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1887.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

SUDDEN DEATH

Is sure to happen to any Rats, Mice, or Vermin that touch

"RAT CATCHER'S" POISON.

Best in the market. Nothing like it. Keep "Toby" and "Pussy" out of the way and try it. Packets at 1s., 6d., & 3d. Pay you well. Sell at sight. Very liberal terms. Order of Wholesale Agents.

WALKER, TROKE & CO., CITY ROAD, LONDON.

COLONIAL AGENCIES INVITED.

FOUND DEAD

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.

SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 24 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

BEST & SAFEST DENTIFRICE.

REGISTERED TRADE MARK.

OSCAR SUTTON & CO., Preston, Lancashire.

NOTICE.—We have had so many enquiries for O.S. Tooth Blocks *loose without boxes*, that we have put them on the market in packets of one dozen, and they are designated No. 0 (please note this when ordering).

Our O.S. Tooth Blocks, in patent metal ic boxes, designated No. 1, are now supplied with sunk recess, into which Chemists can affix their own labels. Appropriate labels in dark leatherette, with Chemist's name, &c., in gilt lettering, can be supplied sufficient for 1 gross at 5s. (actual cost to us).

Chemists' names can be stamped on each Block free of charge on any quantity, the only expense being first cost of dies, at 6d. per letter ordered.

A sample, post free, for two stamps.

From 8d. per gross, of all 1

Manufacturers—W. F. HUNT & CO., 6, 8,

MESSRS. J. AT

Of 5 FINSBURY SQUARE, LONDON, Ma

Beg to inform the Trade that they are Messrs. J & E. Atkinson, of Old Bond Street, but sell their goods upon their own merits, viz.:—QUALITY AND CHEAPNESS.

This Unique Preparation has the extraordinary property of keeping the

HAIR IN CURL.

Now used by Ladies in all parts of the World.

Needs but an introduction to command a ready and constant sale.

FRIZZETTA
(REGISTERED.)
Handsome Show-cards, Glass Tablets, and Circulars profusely supplied.

Foreign and Colonial Chemists should write for Terms, &c.

F. W. BATES, CHEMIST,
BROOKS'S BAR, MANCHESTER.

**WALNUT POMADE.**

A Triumph as a Hair Restorer. An immediate effect.

Pleasant and Harmless.

Four Colours—Golden, Light Brown, Dark Brown, and Black.

Pots— $\frac{1}{2}$ oz. (1/6) 12/ per doz.
1 $\frac{1}{2}$ oz. (2/6) 20/ per doz.

DEPILATORY POWDER
FOR REMOVING

SUPERFLUOUS HAIR
Speedily and effectually, without injuring the Skin.

Retail, 1/; Wholesale, 8/ per doz.

AGENTS:—Barclay; Edwards Maw; and Sanger.

SOLE PROPRIETOR—

EUGENE MORPHY, 70 South Audley St., Mayfair, LONDON

THE BEST PARAFFINUM MOLLE, B.P., IN THE MARKET IS
“PETROLINA.”
 PURE, SWEET, NEUTRAL, NON-OXIDISABLE, UNCHANGEABLE.

Determined to give every possible inducement to the Consumer, the BINGHAMTON OIL REFINING CO. have authorised

A STILL FURTHER REDUCTION IN PRICES.

So that Petrolina is now as cheap as any of the inferior jellies.
 Packed in oak kegs of 112 lbs., 56 lbs., and 28 lbs.; also tins of 14 lbs., 5 lbs., and 1 lb.; and in casks of 2 cwt. and 3 cwt.

SAMPLES AND PRICE LISTS FREE ON APPLICATION TO

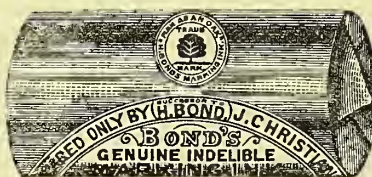
E. A. DE PASS & CO., SOLE AGENTS, 3 COLEMAN STREET, LONDON, E.C.

HENRY BOND'S ORIGINAL “OAK TREE” MARKING INK.

Warranted to remain fluid in all Climates. Produces a brilliant unfading Black.

This valuable invention of the late HENRY BOND claims a preference over all others of the kind in the freedom with which it can be used, with or without the application of heat, and never any fear of injury to the finest fabrics.

Every vendor can safely recommend this Brand without fear of complaint, either as to quality or quantity. With view to guard against spurious imitations, write for Christian Bond's “Oak Tree” Brand.



Facsimile of Wrapper.

Two injunctions have been granted to H. Bond's legal successors, restraining the use of the name, “H. Bond's Marking Ink,” one as recently as Nov. 17, 1882, against F. J. Bond.

GENUINE



ESTABLISHED OVER 70 YEARS.

Ordinary Inks, in all convenient forms for Export and Counter Trade, 6d. and 1s. in blue wrapper, Red Trade Mark, boxed or carded, in 1 dozen each 6d. and 1s. Pedestal, with Stretcher, in 1/2 dozen and 1 dozen boxes; 1/2 oz. and 1 oz. Stoppered Bottles, in boxwood case, for the use of large establishments 2s. 6d. and 5s. each. Complete Illustrated Price List on application. Write for handsome Showcard, Handbills, and Specimen on Linen.

Liberal Discounts to Shippers and the Trade. Sample Bottle supplied gratis and sent post-free to any part of the World on receipt of Business Card. To be obtained through all the leading Wholesale Houses in the United Kingdom.

HENRY YOUNG, Manufacturer, LONDON.

WARREN'S REFINED WOOL FAT,

An excellent Remedy for Skin Diseases,
 1/9 per lb., in 4-lb., 7-lb., and 14-lb. tins, tins free,

OFFERED BY

A. & J. WARREN,

Wholesale Druggists, 23 & 24 Redcliff Street, BRISTOL.

Licensed Makers of Methylated Spirit and Finish.

PROPRIETORS OF STODDART'S SEA SALTS.

Established nearly 40 years. Advertised continually.

1 1/2d. Packets (in dozen boxes), 12/ per gross.

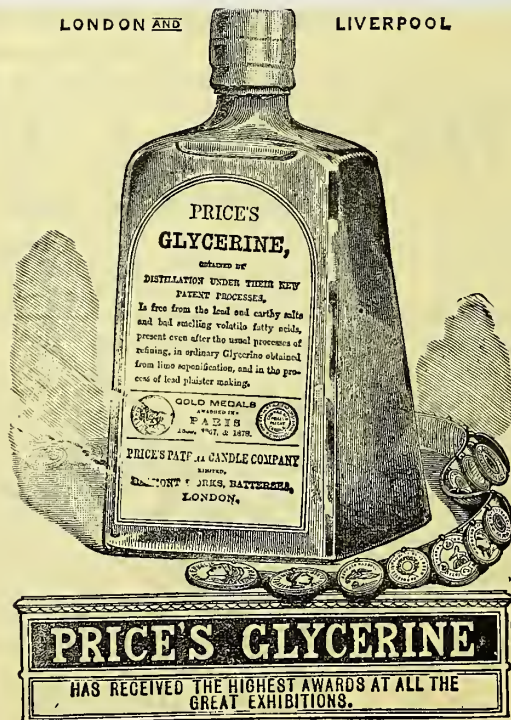
6d. or 2-lb. Boxes	4/ per dozen	4/- or 23-lb. Bags	36/ per dozen.
1/2 or 7-lb. "	9/6 "	8/- or 56-lb. "	72/ "
2/- or 14-lb. "	18/ "	16/- or 112-lb. "	144/ "

Right of manufacture, good will, &c., purchased March 15, 1886.

TERMS—Monthly Account, less 10 per cent. A reduction on 5-cwt. and 10-cwt. lots. Obtainable from Wholesale Patent Medicine Houses. Carriage paid on orders for the above article amounting to £2 and upwards. Handbills and Showcards furnished on application.

LONDON AND

LIVERPOOL



COLTHURST & HARDING,

PHENIX COLOUR WORKS, BRISTOL,
Contractors to the Admiralty, the India Office, and
leading Railway Companies. Manufacturers of

WHITE LEAD, ZINC WHITE,

PAINTS & COLOURS OF ALL KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

TEREBINE & PATENT DRYERS.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators,
and Japanners.

**BALL DENOTES
COLOUR OF PAINT.**

OIL BOILERS, REFINERS & MERCHANTS.
Export Orders receive special and prompt attention.

**PURE
SPIRITS OF WINE.**

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. **STEAM STILL ONLY.**

GEORGE PHILLIPS & CO.,

**ST. ANDREW'S DISTILLERY, CLERKENWELL RD.,
LONDON, E.C.**

B. NOAKES & CO.,

MANUFACTURERS OF

Metallic Casks, Drums, & Kegs

ENAMELLED, PLAIN, AND DECORATED

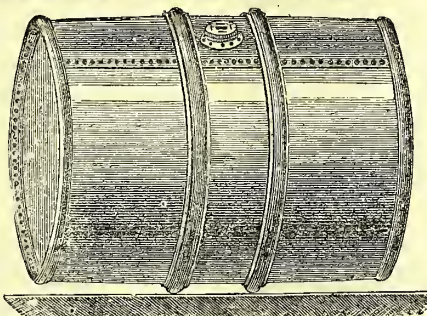
TIN CANISTERS AND BOXES,
FOR PACKING CHEMISTS' AND DRUGGISTS' SUNDRIES.

ENAMELLED SHOW TABLETS.

PATENT SELF-FIXING TINS.

IRON BARRELS,
CAPACITY 40 TO 120 GALLONS
AS PER ILLUSTRATION.

Cable and Telegraphic Address—
"NOAKES LONDON."



These large Iron Casks, similar to sketch, can be handled with equal facility to wooden barrels, and, owing to their strength and durability, can be used over and over again for an indefinite period. They are perfectly liquid tight, being tested at a very high air pressure, and, unlike wood, do not absorb any of the contents. They are all fitted with interchangeable screw bungs, and can also be fitted with screw plug in head, for draw-off tap.

They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Inflammable Liquids of every description.

We are making them in three qualities, "Black Iron," "Lead Coated," and "Tinned."

PRICE LIST ON APPLICATION.

Offices and Works: 142 SPA ROAD, BERMONDSEY, LONDON, S.E.

AUSTIN & CO.,
PATENTEES & MANUFACTURERS OF ROUND CARDBOARD AND OTHER SHAPED BOXES,

BRITISH AND FOREIGN,

For POSTAL and general purposes; also PATENT BARREL PACKAGES with Metal ends for dry goods.
Inventors of the "NOVEL" METAL PERFUME SPRINKLERS.

Office & Warehouse—8 GREVILLE ST., HATTON GARDEN, LONDON, E.C.
Steam Works, Mount Pleasant, Gray's Inn Road, London, and Ring Factory, Clonakilty, County Cork.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKLEY & SONS,

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKLEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakley's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

OAKLEY'S NON-MERCURIAL SILVER SMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S "POLYBRILLIANT" (Registered).

A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes.
Tins 1d., 2d., 3d., and 6d. each.

WELLINGTON BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.
Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1883. Gold Medal, Crystal Palace, 1884.

W. H. B. WHITE } BEESWAX. W. H. B. REFINED }

CERTIFICATE OF ANALYSIS.

ROYAL INSTITUTION LABORATORY.

Liverpool, Sept. 4th, 1886.

MESSRS. W. H. BOWDLEAR & CO.

GENTLEMEN,—I have carefully analysed a cake of White Wax stamped "Pure W. H. B. Beeswax, W. H. Bowdlear, Boston, Mass., U.S.A.," with the following result:—Melting point 150° F., specific gravity 9635. There is no Paraffine, Resin, fatty matter, or other adulterant present, and I find it to be Pure White Beeswax.

I remain, yours respectfully,

EDWARD DAVIES, F.C.S. and F.I.C., &c.

We will deliver our goods, carriage paid, to any city or town in the world in 15-cut. lots.

CABLE ADDRESS—"BOWDLEAR BOSTON."

W. H. BOWDLEAR & CO.,
147 Pearl Street, BOSTON, MASS., U.S.A.

CHUBB'S Best SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d., and in hinged boxes, 8s. 6d., per dozen.

CHUBB'S Extra VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. gross, and 2d. Boxes, 11s. gross, and in ½-lb. and ¼-lb. Packets, 10d. per lb.

CHUBB'S Pre- pared FULLER'S EARTH

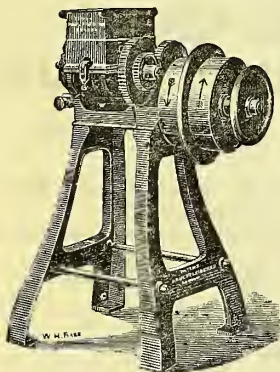
In 1d. Boxes 5s. gross, and 2d. Boxes, 9s. gross, and in 8d. and 6d. Round Boxes, 1s. 6d. and 2s. dozen.

SUBJECT TO 15 PER CENT. DISCOUNT FOR CASH.

May be obtained through all the Wholesale Houses, or direct from

CHUBB & CO., 29 OLD ST., LONDON, E.C

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.



CHEMISTS' MACHINERY.

PILL MASS KNEADING MACHINES.

PILL MAKING MACHINES.

DRUG GRINDING MACHINES.

SIFTING MACHINES.

FULL PARTICULARS OF ABOVE ON APPLICATION TO

WERNER & PFLEIDERER, 86 Upper Ground St., Blackfriars Bridge, LONDON, S.E.

M. A. CRAVEN & SON, WHOLESALE AND EXPORT CONFECTIONERS,

MAKERS OF

Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery,

IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.

**EBOR CONFECTIONERY WORKS.
YORK.**

Lozenges of all descriptions made from Customers' private formulæ (or Ingredients), and stamped with any name or device.

SPECIALITIES—Cough, Peppermint, Rose, Musk, Bouquet, Cachou, and all kinds of Medicated Lozenges.
ESTABLISHED 1843.

PRICE LIST ON APPLICATION.

W. KEMP & SON, SEED CRUSHERS, HORNCASTLE.

COPY OF ANALYTICAL REPORT.

G. CARR ROBINSON,
F.R.S.E., F.I.C., F.G.S.

SCHOOL OF CHEMISTRY,

AND

ANALYTICAL LABORATORY,

ROYAL INSTITUTION,

HULL, 11th March, 1887.

Report on Samples of Crushed Linseed received from
MESSRS. W. KEMP & SON, HORNCASTLE.

SAMPLE MARKED

"KEMP'S No. 1 BEST LIGHT
CRUSHED LINSEED."

This sample is perfectly pure Crushed Linseed. It is made from a first-class grade of seed, and is remarkably free from dirt, soil, &c. It is free from any starchy matters. It has a bland oleaginous taste, producing no bitterness in the mouth nor any burning sensation. It shows a very high proportion of oil, viz., 44.5 per cent.; and 3 per cent. of mineral matter (or ash).

SAMPLE MARKED "X."

This sample is not pure. It contains an amount of starchy matter which is foreign to pure clean Linseed, and these starch granules correspond closely with those naturally present in Germ Meal. It also contains a coarse, nearly-black husk, not that of linseed. This sample has a bitter, burning taste, and imparts a hot "after-taste." It is low in oil, showing 32.44 per cent.; and it contains nearly 5 per cent. of mineral matter (or ash).

G. CARR ROBINSON.

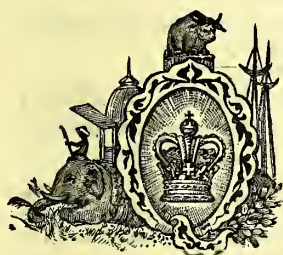
The sample "X" was one of the many Crushed Linseeds now offering to the Trade at low prices and of nice appearance.

SAML. CLARKE,

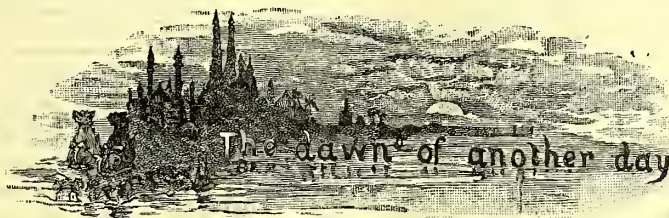
"FAIRY" LAMP AND "FAIRY" LIGHT WORKS,

CHILD'S HILL, LONDON, N.W.

Show Room: 31 ELY PLACE, E.C.



QUEEN'S BURMESE WARE is of the nature of glass, its discovery (for that it was rather than invention) is due to the United States; the ware is now manufactured in England under a patent. Its loveliness when illuminated is due to the material, its translucency, and its blending from peach to yellow, which is of the perfectness that radiated heat alone can effect.



"FAIRY" LAMPS AND "FAIRY" LIGHTS.

The patentee of the "FAIRY" Lights considering the Burmese Ware very suitable for his "FAIRY" Lamps, has had made of that Ware some very beautifully designed Chandeliers, Candelabra, Brackets, Bowls, &c, which he is pleased to add to his already large and varied stock of "FAIRY" Lamps.

His additional Show Room at 31 Ely Place, Holborn Circus, is fitted up expressly for the display of these beautiful goods and is now ready for inspection by the Trade. There will be a Special Illuminated Display every Tuesday and Friday. The goods will be on show every day.

This "FAIRY" system of Illumination has called forth numerous encomiums from both individuals and the Press, but no greater compliment could possibly be paid than that of the Royal Botanic Society of London on June 30th and July 10th, 1886, when not only did the Council graciously award a "Special First Class **GOLD MEDAL**," but a resolution conveying a vote of thanks "to Mr. Clarke for his great assistance at the Evening Fêtes of June 30th and July 7th, 1886," &c. Then again in *Punch*, July 17th, 1886, there appeared—"Royal Botanical Fête! **Illuminations perfect. Great Success. All sweetness and light.**" Complimentary articles appeared in *Truth*, February 25th and March 4th, 1886; *The World*, April 21st, 1886; *The Pottery Gazette*, August 2nd, 1886; and various other Journals of high-class standing.

N.B.—All the Lamps bear the Trade Mark "**FAIRY**," without which none are genuine.

Patented, and Trade Mark "FAIRY" Registered in Great Britain, France, Germany, Belgium, Spain, Austria, Russia, United States of America, and all the Australian Colonies.

ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER.



CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Baines & Co., Edinburgh, are now and have been Agents 54 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burdidge & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall Brothers and Barclays, Birmingham; R. Hovenden & Sons, 93 & 95 City Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia St., Glasgow; John Thompson, 58 Hanover Street, Liverpool; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delacre, Pharmacie Anglaise, Bruxelles. And by all Chemists, in Pots, 1/6, 2/9, 5/9, and 18/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanstreet & Co. W. H. JAMES, Sole Manufacturer, STANFORD, FARRINGTON, BERKS. Advertis'd in "Bell's Life" 54 years. Beware of Spurious imitations.

INDEX TO ADVERTISEMENTS.

See pages 17—19.

CARBOLIC POWDER £4 TON.

1 ton lots and upwards.

CARBOLIC PINK POWDER,
6/, 8/, and 10/ PER CWT., in bags or casks.
HANDSOME LARGE DECORATED BLACK AND GOLD TIN BOXES.

Size 7½ ins. by 3 ins. diameter, holding 1½ lbs. (usual 1/ size).
3s. DOZEN.

Ditto, **LARGE SIZE**, holding about double quantity,
4/6 DOZEN.

CRUDE CARBOLIC ACID (Brown),
9d., 1/, and 1/6 GALLON; also in patent stoppered
bottles, labelled, ½ pint (1/ size), **4/ DOZEN.**

DARK SANITARY FLUID

(To be used with 80 parts of water, making a milky fluid).

3/6 PER GALLON.

10 per cent. discount off above prices for cash with order.

All goods delivered free in London or suburbs, or to rail or docks.

THE CHEAPEST HOUSE IN THE TRADE.

HAMILTON & CO.,

118 HIGH ST., WANDSWORTH, LONDON, S.W.

HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).



THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—
1 oz. pots from 14/- per doz. to 12/6 per doz. ½ lb. pots from £4 4 0 per doz. to £4 0 0
2 " " £1 5 6 " £1 8 0 " 1 " " 7 16 0 " 7 10 0
4 " " 2 8 0 " 2 4 0 "

Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, BUTLER & CRISPE, 4 Cheapside; NEWBERY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & CO., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to R. J. JAMES, South Retford, Notts.

JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

WALKER, TROKE & CO.,

WHOLESALE & EXPORT DRUGGISTS,

82 CITY ROAD, LONDON, E.C.,

Sole Proprietors of



Sole Proprietors of

GABRIEL & TROKE'S GELATINE CAPSULED HORSE BALLS.

PERMANENT IN SHAPE. EASY IN ADMINISTRATION. EFFICACIOUS IN ACTION.

Each Genuine Ball has a Gelatine Label bearing the Maker's Name.

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS ON BEST POSSIBLE TERMS.

HORSE, CATTLE, AND SHEEP MEDICINES.



By Special Warrant,
Dated 27th December, 1865.

BY ROYAL APPOINTMENT.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant,
Dated 10th February, 1866.

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

Containing the following Matchless Remedies for all Disorders in Horses, Cattle, Calves, Sheep, & Lambs:

THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, and swellings in horses; for pain after calving and lambing, and for swollen udders and sore feet. ¼-dozen box, 7s. 6d.

THE RED DRENCH.

Celebrated for inflammatory disorders; such as fevers, pleurisy, foot-and-mouth complaint, yellows, surfeit, and red water. Also for difficult calving and lambing. 3s. 6d. and 13s. per dozen box.

THE GASEOUS FLUID.

Unmatched for colic or gripes and debility in horses, for colds, chills, shivering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

THE CARMINATIVE CHALK.

A warm stomachic in severe diarrhoea or flux, by way of change of the gaseous fluid in great irritation of the bowels. ¼-dozen box, 10s.

Price of Chests, with "Guide to Farriery"—No. 1, £6/6/0; No. 2, £2/16/6; No. 4, £2/17/6 (for horses only). Carriage paid.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, LONDON. W.

And sold by all Wholesale Houses in London; Hood & Co., Melbourne; Felton, Grimwade & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Sharland & Co., Druggists, Auckland; Fairthorne & Co., Launceston; Dombrain & Co., Christchurch; Jenoure & Co., Jamaica.

A LIBERAL DISCOUNT TO EXPORTERS, AND ALL PARTICULARS ON APPLICATION.



BY SPECIAL
APPOINTMENT.

SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES

(WITH BEETROOT).



BY SPECIAL
APPOINTMENT.

DOG MEDICINES for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

"COMMON SENSE OF DOG DOCTORING," price 6d.

DOG SOAP.

LOCURIUM. Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs, Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kind either in man or beast. Small Pamphlets on Canine Diseases supplied free for distribution.

WHOLESALE
TERMS OF

SPRATTS PATENT LIMITED, LONDON, S.E.,

OR YOUR WHOLESALE
HOUSE.

The True Origin of the Old Rhyme.



Where are you going to Mr. Pretty Maid?
I'm going a milking, Sir she said.
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They are, thanks to DAY & SONS, Sir she said.

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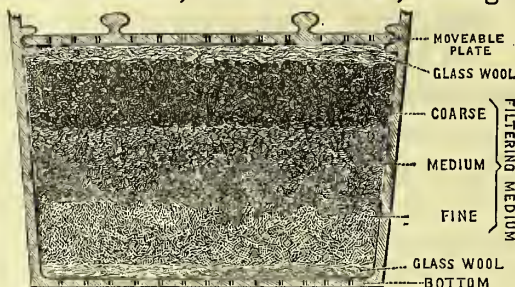
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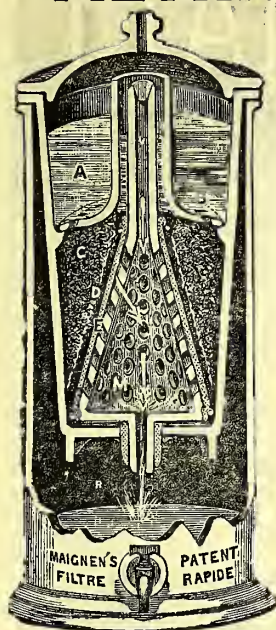
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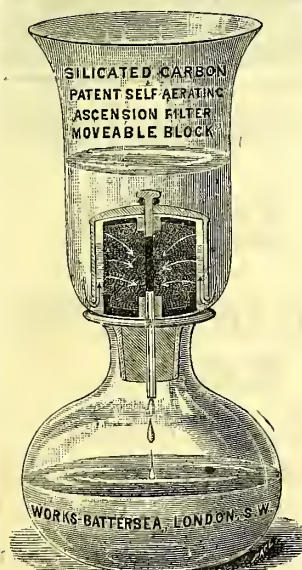
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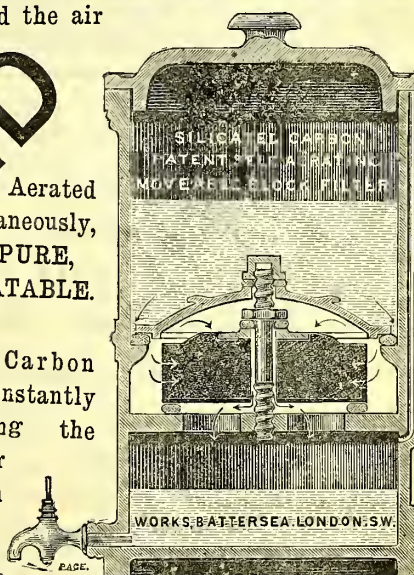
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Each time that the Filter is filled the air under the Aerator Cover is forced in the direction shown by the arrows through the Silicated Carbon Block, so that the Water is & Filtered simultaneously, rendering it BRIGHT, &

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PURE,
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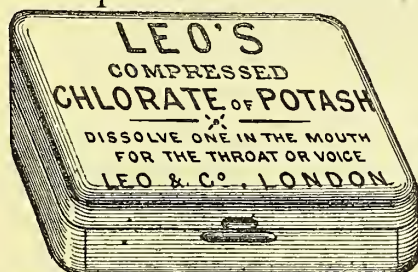
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Send a cheque for 25/- and I will forward either of the following, together with a HANDSOME
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Heart Shape 	1	Inches. 3 x 4½	d. 1 size.	„	s. d. 0 8	s. d. 0 8	s. d. 0 8	s. d. 0 8	s. d. 1 4	s. d. 1 0
	2	4½ x 6	1½ „	„	1 0	1 0	1 0	1 0	2 0	1 6
	3	4½ x 7½	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
	3½	5½ x 7½	3 „	„	2 3	2 3	2 0	2 0	4 0	3 0
	4	6½ x 8½	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
	5	8 x 9½	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
Long Shape 	1	2½ x 4	1 „	„	0 8	0 8	0 8	0 8	1 4	1 0
	2	4½ x 6½	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
	2½	4½ x 8½	3 „	„	2 3	2 3	2 0	2 0	4 0	3 0
	3	5½ x 9½	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
	4	6½ x 11	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
	5	7½ x 14½	8 „	„	6 8	6 8	6 0	6 0	12 0	8 0
Oval Shape 	1	4½ x 6½	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
	2	6½ x 8½	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
	3	7½ x 9½	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
Saddle Shape 	1	6½ x 12½	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
	2	7 x 15	8 „	„	6 8	6 8	6 0	6 0	12 0	8 0
	3	8 x 16	12 „	„	8 8	8 8	8 0	8 0	15 6	12 0
Wrist 	1	3 x 10½	3 „	„	2 3	2 3	2 0	2 0
Knee 	2	4½ x 15	6 „	„	4 6	4 6	4 0	4 0

BREAST PLAISTERS.		No.	Size of Leather	Retail Prices.	Per doz.
				<i>d.</i>	<i>s. d.</i>
Emp. Plumbi, for Ladies' Breasts		1	Diam. 6½ in.	4 size	2 8
Emp. Plumbi, for Ladies' Breasts ..		2	" 7½ "	6 "	4 0
ditto spread on Chamouis ..		1	" 6½ "	" ..	4 0
ditto ditto ..		2	" 7½ "	" ..	6 0

BREAST PLAISTERS.		No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.
				<i>s. d.</i>	<i>s. d.</i>
Emp. Belladonna, for Ladies' Breasts		1	Diam. 6½ in.	5 4	4 0
ditto		2	" 7½ "	8 0	6 0
ditto spread on Chamouis		1	" 6½ "	8 0	6 0
ditto ditto		2	" 7½ "	12 0	9 0

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"	" on White "	8/0

Every other description of Plaister used in Pharmacy or Private Formulæ spread on any material, to suit any climate.

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" Ammon. c. Hydrarg.	16/0	80/8	36/0	5/6
" Antim. Pot. Tart.	10/0	24/0	30/0	4/0
" Belladonna	13/3	15/0	24/0	24/0	30/0	5/6
" Calefaciens	5/8	6/4	11/3	11/3	22/6	..
" Cerat Saponis	6/6	7/6	12/0	12/0	22/6	..
" Dreadnought	9/0	10/0	14/0	14/0	24/0	4/6
" Elemi	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri	9/0	10/0	14/0	14/0	24/0	4/6
" Galbani	14/0	24/0	30/0	4/6
" Hydrarg.	14/0	15/0	18/0	18/0	27/0	4/6
" Iodine	16/0	30/0	36/0	5/6
" Opii	18/0	20/0	27/0	27/0	36/0	5/6
" Picis Co.	11/0	12/0	15/0	15/0	24/0	4/6
" Plumbi	5/6	6/6	12/0	12/0	21/0	4/0
" Potass. Iodid.	16/0	30/0	36/0	5/6
" Resinæ	5/6	6/6	12/0	12/0	21/0	4/0
" Roborans	5/0	5/6	10/0	10/0	20/0	..
" Saponis Alb.	5/6	6/6	12/0	12/0	21/0	4/0

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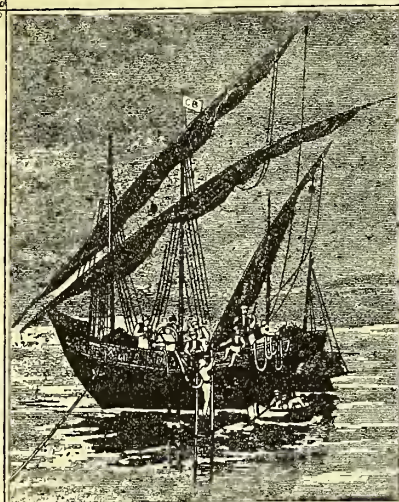
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Sole Agents for the Cuban Sponge Fishing Company.

Branches at 3 ALBION CRESCENT, GLASGOW; 11 WETERINGSTRAAT, AMSTERDAM.

❖ SPONGE ❖

SEASON 1887.

CRESSWELL BROTHERS hold the **LARGEST** and **MOST VARIED STOCK** of **SPONGES** in the **WORLD**, and their **Prices** will be found to be the **LOWEST** IN THE **TRADE**.

WRITE FOR SAMPLES OF SPECIAL LINES FOR SUMMER DISPLAYS.
ILLUSTRATED PRICE LIST SENT FREE ON APPLICATION.

CRESSWELL BROTHERS have just published a most artistic **GILT BEVELLED-EDGE SHOW CARD**, which will be presented gratis to every purchaser of a Case of Sponges.

Manchester JUBILEE Exhibition, May, 1887.

MESSRS. CRESSWELL BROTHERS beg to announce to their customers, and the trade generally, that during the entire month of MAY they will exhibit a large assortment of **SPONGES** at the

VICTORIA HOTEL, MANCHESTER.

This display will be the **FINEST EVER SEEN IN THE PROVINCES**, and intending purchasers should make a special effort to call and inspect it.

Please note that an early appointment is necessary by Post Card to our Representative :
Mr. T. R. VERMONT, Victoria Hotel, Manchester.

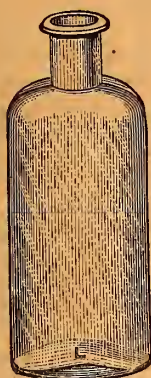
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SPONGE IMPORTERS AND MERCHANTS,
[NEXT TO CHURCH] **2 RED LION SQUARE, LONDON, W.C.**

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DISPENSING BOTTLES



QUININE TINTED.
"L" BRAND.



Warranted Finest Quality Metal, Good
 Mouths, and Correct Measure.

CATALOGUE No. 42a. In any quantity from Stock.

FLATS OR OVALS.

Size	...	1 oz.	1½ oz.	2 oz.	3 oz.	4 oz.	6 oz.	8 oz.	10 oz.	12 oz.	16 oz.	20 oz.	24 oz.	32 oz.	40 oz.
Per Gross		9/-	9/6	10/-	10/6	10/6	11/6	11/6	16/-	17/-	21/-	25/-	27/6	36/-	40/-

Discount : 10 per cent. Monthly, 5 per cent. Half-yearly.

ALSO

IN ORIGINAL PACKAGES DIRECT FROM WORKS.

Carriage paid to Bristol, Glasgow, Liverpool, or London.

"L" BRAND. CATALOGUE No. 42a.

Size	...	1 oz.	1½ oz.	2 oz.	3 oz.	4 oz.	6 oz.	8 oz.	10 oz.	12 oz.	16 oz.	20 oz.	24 oz.	32 oz.	40 oz.
Per Gross		7/6	8/-	8/-	8/6	8/6	9/6	9/6	12/6	13/6	16/6	20/-	22/-	29/-	33/-

BEST GREEN FLINT FLATS OR OVALS.

CATALOGUE No. 42.

Size	...	½ oz.	1 oz.	1½ oz.	2 oz.	3 oz.	4 oz.	6 oz.	8 oz.	10 oz.	12 oz.	16 oz.	20 oz.	24 oz.	32 oz.	40 oz.
Per Gross		6/-	6/-	6/-	6/-	6/8	6/8	7/9	7/9	10/6	11/6	15/-	19/-	22/-	27/6	32/-

Strictly Net Cash

CASKS OR CRATES EXTRA.

LYNCH & CO.,
ALDERSGATE ST., LONDON, E.C.;

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INGRAM & ROYLE

Have the pleasure to announce to the Trade that they have issued a

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Which will be forwarded on application.

The Prices INCLUDE CARRIAGE to any Railway Station in England and Wales or Port in Scotland or Ireland.

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LONDON, E.C.

21st April, 1887.

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The medical profession order Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS,

For Children Cutting their Teeth, to Prevent Convulsions.

Sold in Stamped Boxes, at 1s. 1½d. and 2s. 9d. (great saving), with full Directions.

Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

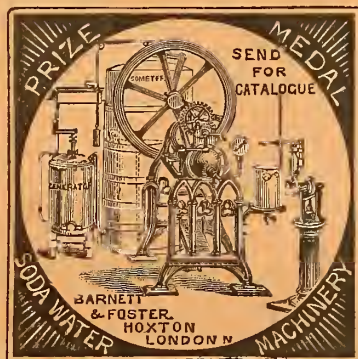
Chemists, by applying to the Patent Medicine Houses and Wholesale Chemists, can obtain, free of any charge, a supply of "FENNINGS' EVERY MOTHER'S BOOK," for Counter distribution.

EASY
TEETHING.

SAFE
TEETHING.

SODA WATER MACHINERY

And all Appliances for the Manufacture of all Aerated Drinks in the highest state of perfection.



PRIZE MEDALS—London, 1862, 1873, 1874; Paris, 1867, 1878; Vienna, Philadelphia, Cape, &c. HIGHEST AWARD—Sydney, 1879-80.

FIRST-CLASS CERTIFICATES & 4 PRIZE MEDALS, CALCUTTA, 1883-84.

THREE GOLD, TWO SILVER, & TWO BRONZE MEDALS, INTERNATIONAL HEALTH

EXHIBITION, LONDON, 1884.

Our Machines are universally adopted throughout the world for the manufacture of all kinds of Aerated Drinks, whether in bottles, syphons, or counter fountains. There are in England alone over 2,000 factories where our Machinery is in use, besides many thousands in India and the Colonies. They are the simplest, safest, and cheapest for the purpose, and produce a highly-charged gaseous water free from metallic or foreign contamination. All our Machines have a Gasometer, and it forms a most important necessity where purity of product is required, as in this the gas is expanded and purified; it also removes the possibility of accidents by explosion, and avoids the necessity of complication—these we consider of greater importance than the saving of a few inches of floor space.

A complete Soda Water Plant, including Bottling Machine, for producing 100 dozen Lemonade, Ginger Beer, Ale, &c., per day, is supplied for £40.

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BARNETT & FOSTER,

26th Eagle Wharf Road, New North Road, London, N.

A copy of this Supplement is inserted in every number issued of "THE CHEMIST AND DRUGGIST."



THE CHEMIST AND DRUGGIST.
EXTRA SUPPLEMENT TO

BUSINESSES WANTED. PARTNERSHIPS.
BUSINESSES FOR SALE. SITUATIONS WANTED.
PREMISES TO LET. AUCTION SALES.
EXCHANGE COLUMN.

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on Thursday afternoon, or by first post on Friday morning of each week.

Remittances payable to EDWARD HALSE, crossed MARTIN & CO. Stamps are taken in payment.

The Terms for Advertisements in this Supplement will be found printed under each heading.

OFFICE: 42 CANNON STREET, LONDON, E.C.

Further Proof of the Value of "THE CHEMIST AND DRUGGIST" as an Advertising Medium.

"It is only right I should at once become a subscriber to your Paper, as I got my first and only situation as Assistant, and also this business, through seeing advertisements therein." 177/34.

SATURDAY, MAY 14, 1887.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.,

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application:—

- 1.—£825.—LONDON.—Within easy distance of Bank of England; good-class Retail and Dispensing, with Prescribing; returns average £825, with profits considerably over the average; handsomely fitted shop, and good stock; large house; about £700 required; worth attention.
- 2.—£600.—LONDON, N.—Good-class Retail and Dispensing; large, handsome, newly-fitted shop; returns rapidly increasing; returns at present at the rate of over £300 yearly; large house; valuation of stock and fixtures only required.
- 3.—£700.—LONDON, W.C.—First-class Business, situated in a commanding position; returns nearly £700 yearly; capable of being largely increased; handsomely-fitted shop, and good stock; price about £650.
- 4.—£550.—LONDON, W.—Retail, Dispensing, and Prescribing; conducted by an assistant; returns at present nearly £550, with good profits; large double-fronted corner shop; good house; moderate rent; price about one year's returns.
- 5.—£400.—LONDON, S.W.—Good-class Retail and Dispensing, with good appointment attached; double-fronted shop; returns at present about £400 yearly; capable of great extension; good house; price about £400, or offer.
- 6.—£400.—SOMERSET.—Good market town; Retail and Dispensing Business of good class; returns under manager nearly £400; open to the fullest investigation; good house; price about £300.
- 7.—£1,000.—STAFFORDSHIRE.—Good-class Retail and Dispensing; returns (increasing) about £1,000 yearly, with good profits; large and convenient house; partnership introduction can be arranged if wished; price about £750, or an offer will be considered.

8.—£1,500.—SOUTH OF ENGLAND.—Good town; Retail, Dispensing, and Prescribing Business, of good class; returns under management about £1,500; convenient house; rent moderate; every investigation allowed; price about £1,500.

9.—£850.—OXFORDSHIRE.—Good-class Retail and Dispensing, with Homoeopathic trade attached; returns last year about £675, this year at the rate of £850, with good profits; large and convenient house; situate in a commanding position; price about one year's returns, or reasonable offer.

10.—£850.—DERBYSHIRE.—Attractive town; first-class Retail and Dispensing Business; returns over £850 yearly, net profits £350; well-fitted shop, and good stock; large attractive house; rent may be covered by letting; price about £830.

11.—£6,000.—HOME COUNTIES.—Wholesale and Retail; returns nearly £6,000, with good profits; a Partner for half share is required; the investment of about £1,800 is required; full particulars (to bona-fide purchasers) in confidence on application; references must be enclosed.

12.—£800.—PROPRIETARY.—Partner required for well-known Proprietary article; returns at present about £800, capable of being much improved; full particulars in confidence on application.

13.—£400.—MIDLANDS.—Branch Business for immediate disposal; returns nearly £400 under an assistant, can be much improved by principal; good house; position good; any reasonable offer will be considered.

14.—£1,230.—YORKSHIRE.—Good town; good-class Business; no heavy trade; returns at present at the rate of £1,230; good house, well situate; price about £700, or valuation terms can be arranged.

WANTED.

WANTED.—PARTNERSHIPS OR FIRST-CLASS DISPENSING BUSINESSES, EITHER IN LONDON OR GOOD PROVINCIAL TOWNS—PROFITS NOT UNDER £500 YEARLY.—CASH READY.

N.B.—No CHARGE TO PURCHASERS. Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms, where business of a confidential nature requires the especial attention of a London agent.

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Chemists' Businesses, Partnerships, Openings, &c., London or Country, negotiated. Locum Tenens and Assistants supplied. Valuations, Investigations, &c., undertaken. Outstanding Accounts Collected.

PROSPECTUS FREE ON APPLICATION.

Address, The SECRETARY, 27 Margaret Street, Cavendish Square, London, W.

BONA-FIDE BUSINESSES WANTED.

THE BRITISH AND COLONIAL AGENCY, LIMITED, 27 Margaret Street, Cavendish Square, London, W., are authorised to dispose of the following Chemists' Businesses:—

No. 1102.—Notts; returns about £450; price £220.
No. 1103.—Partnership, old-established Shipping and Retail; returns about £1,300; half profits; price for half share, £650.
No. 1104.—London, S.E.; Wholesale and Retail; returns about £800; price £600.

Well worth attention. We have also many others. Assistants and Locum Tenens required for the coming season.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

FOR DISPOSAL, a small, well-stocked, compact Retail, Dispensing, and Prescribing Business, situate in Channel Islands. Bonâ-fide principals, with at least £100, apply to "Chemist," 1 Dorset Buildings, Salisbury Square, E.C.

FOR SALE (on account of the death of the proprietor), a small Drug, Botanical, and Oil Business, situated in one of the thoroughfares of Leicester; price about £100, being value of stock, fixtures, &c. Apply, Clark, Nettleship & Bailey, Leicester.

IN LONDON (main thoroughfare).—A genuine, old-established Retail and Dispensing Business; will bear strict investigation; price £850 cash; no agents. Apply to Messrs. Hodgkinson, Stead & Treacher, 198 Upper Whitecross Street, E.C.

TO RETAIL AND DISPENSING DRUGGISTS.—To be sold immediately, a Family, Retail, and Dispensing Drug Business; situate in one of the best and busiest thoroughfares in the town of Kingston-upon-Hull; the shop is very well fitted, and attached is a comfortable and convenient dwelling-house. For further particulars address, Lofthouse & Salmer, Wholesale Druggists, Hull.

TWO BUSINESSES for disposal, cheap, together or separately; returning together nearly £900; one a branch in a pleasant, rapidly-rising suburb; rent low, on favourable agreement for lease; excellent chance for small capitalist; the other, old-established, in great thoroughfare, on lease. "Xericum," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE, at the seaside, a genuine old-established Chemist and Druggist's Business; price for stock, fixtures, &c., £450; house on lease at low rental, or freehold will be sold. Further particulars of Mr. William Sayer, Solicitor, Great Yarmouth.

YORKS.—Good-class Retail, Prescribing, Agricultural, and Mineral Waters; returning £1,500 per annum; very healthy market town; vendor retiring; will be sold at a valuation of stock and fixtures, about £700, part of which can remain. F. J. Brett, Valuer, 60 St. Stephen's Road, Leicester.

GOOD Prescribing and Retail trade with Dispensing; full prices; profits, half returns; could soon be doubled by person with small capital; purchasers had better not lose time as it will soon be sold; situated near the banks of the Medway, where there is splendid boating and fishing; price about £250. "Chemicus," 1 Trinity Terrace, Victoria Road, Maidenshot.

TO CHEMISTS AND DRUGGISTS.—To be disposed of, with immediate possession, good House and Chemist's Shop, being 277 Waterloo Street, in one of the best positions in the town of Burton-on-Trent, close to the Midland Railway Station; stock, fixtures, &c., at valuation; stock low. Apply, at first instance, to T. W. Carte, 11 St. Paul's Street East, Burton-on-Trent.

W. H. TAYLOR & CO.,

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Are instructed to Transfer the following:—

EASTERN COUNTIES—Good-class Family and Agricultural Business; returns over £1,200, and increasing; at valuation.

LONDON SUBURB.—In rapidly-growing good-class residential neighbourhood; recently-established Business; returns over £300; good house; rent £35; price £270.

YORKSHIRE.—Good-class Business; average returns about £1,100, at good prices; price £600.

STAFFORDSHIRE.—Retail and Dispensing Business; good openings for Dentistry, also Agricultural trade; price £800, or valuation.

LONDON SUBURB.—Improving Business; returns last year £313; net profits £131; rent £40; price £350.

W. H. T. & Co. have a long list of others on their books for disposal.

A printed Register can be had gratis.

WEST OF ENGLAND.—Large market town; good-class Retail, Dispensing, and Prescribing Business; returning £850; capable of increase; net profit £350; low rent, valuable lease; 10-roomed house, garden, fruit trees; price £600.

CORNWALL.—A similar business; price about £800. For details apply, Messrs. Berdoo & Co., 30 Jewry Street, Aldgate, London.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

A GENUINE DISPENSING and Retail Business, returning from £800 to £1,000; a fair price (cash) will be given for a really bonâ-fide concern; no agents. Address, Mr. Williams, The Hawthorns, Drybrook, Gloucestershire.

WANTED, a genuine Retail Business, returning from £500 to £800, either in Midlands or South of England; London not objected to. H. H., Hirst, Brooke & Hirst, Wholesale Druggists, Leeds.

WANTED, first-class Dispensing Business, doing about £600 or £800, capable of increase; or Shop in good neighbourhood where there is opening for first-class business; healthy locality out of London; no agents. Full particulars, in confidence, A. N., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, in a small country town or agricultural district, a Genuine Business, returning from £700 to £1,000, with a net profit of £250 to £350, with good house and garden; large town or manufacturing district not entertained. Address, with particulars (in confidence), to "Delta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

EMPLOYERS WANTING ASSISTANTS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, Junior for quick trade; time for study. State terms, &c., Webster, West Bromwich.

A GOOD JUNIOR; must be steady and obliging; state age and reference. Waites, Tredegar, Kiloh.

WANTED, Junior of good address, for Retail Mixed Business; good references essential; liberal salary to a suitable man. J. K. Slack, Chemist, Prescott.

ASSISTANT; well up in Dispensing and general Retail; Minor qualification preferred; about 22; seven others employed. Apply to W. Thomas, 103 Talbot Road, Bayswater, W.

WANTED at once, a Junior Assistant for 3 months; must have first-class references. Apply to Mr. H. J. Blackburn, Chemist, 413 West Derby Road, Tue Brook, Liverpool. Applications not answered in 3 days declined.

IMPROVER, first week in June, in good-class Light Mixed Retail and Dispensing; easy hours; no Sunday duty; state full particulars. B. W. Price, Market Cross, Stow-on-the-Wold, Glos.

AN ASSISTANT for Retail and Prescribing business; state age, height, reference, and salary required. Apply by letter in first instance (those not answered in 3 days declined), Lockyer Bros., Chemists, 88 Evelyn Street, Deptford, S.E.

JUNE.—Mixed business, Assistant; indoors; not over 22 years; good salesman and prescriber, and seeking a permanency, with time for study; salary £30; member of Wesleyan society preferred. "Ajax," Messrs. Hirst, Brooke & Hirst, Aire Street, Leeds.

WANTED, by a Wholesale Drug house in the provinces, a competent Invoice Clerk; must be quick at figures and a good penman. Address, stating experience, age, and salary required, "Invoice," care of Messrs. G. Street & Co., Cornhill, London, E.C.

AGENTLEMANLY Youth as Junior; must be steady, obliging, and have had dispensing experience. Apply, stating age, height, experience, and salary required (if convenient, please enclose carte, to be returned), J. R. Clement, Egremont, Cheshire.

INVOICE CLERK wanted, who has had experience in the Wholesale Drug trade. Apply, by letter only, stating age, experience, and salary required, to Mr. Webb, Burgoyne, Burbidges, Cyriax & Farries, Wholesale Druggists, 16 Coleman Street, London.

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1s. for twelve words; 6d. for every six words beyond.

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DISPENSER or otherwise; outdoor preferred; aged 23; 5 ft. 7 in. E. G., Chemist, Walton-on-Naze.

ASSISTANT; qualified; aged 24; good house; disengaged H. R. Broad, Chaddesley, Kidderminster.

AT WET COUNTER; Wholesale; experienced; disengaged. "Medicus," 3 Brett Road, Amherst Road, Hackney.

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AS ASSISTANT; aged 28; height 5 ft. 11 in.; first-class references; indoors; will give one month's trial. W. F. Preen, 52 Richmond Road, Montpelier, Bristol.

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OUTDOOR.—Temporary, part time, or season; 15 years' varied experience. T. Curtis, 119 Raiton Road, Herne Hill, S.E.

JUNIOR DISPENSER to Doctor or Surgeon, by one who will give his services free for six months; indoor; board, &c. For particulars to Tyler, Cwm Avon, Portlabbot.

AS TRAVELLER, or Traveller and Assistant to Wholesale Chemist; aged 25; good references. G. W., 10 Norfolk Buildings, Bath.

CHEMIST'S Locum Tenens; thoroughly competent, qualified, and obliging; good prescriber and dispenser; extracts teeth; well recommended. Write for terms to 5 Park Valley, Nottingham.

AS MANAGER of Branch; country preferred; aged 24; married, no family; lifelong abstainer; good prescriber and teeth extractor; good references. "Seidlitz," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS MANAGER of Branch, or for widow, by registered Chemist; town and country experience; first-class references; seaside preferred. E. R., 18 Knivet Road, Fulham, S.W.

AGENT.—As Agent to Wholesale Druggists or for Proprietary Medicines and Druggists' Sundries, by gentleman residing in Dublin; 15 years' experience of general Drug business; highest references. "Agent," 14 Hardwick Street, Dublin.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading which can be obtained on application.

AGENTS wanted for "Dr. Birley's Anti-Catarrh" and "Baby's Blessing"; exceptionally favourable terms to special agents. Write to-day for particulars to E. Birley & Co., 1 Cecil Street, Strand, London, W.C.

YOUNG'S GENUINE POMFRET CAKES!—Seven lbs. of the best Pontefract Cakes sent, carriage paid, for P.O.O. for 6s. 6d., or 1 doz. 1s. tins for 8s. (for export in 14-lb. sealed tins). J. Young, Chemist, Pontefract, Yorks.

MANUFACTURER of Invalid Foods is open to take Agency for similar goods, or articles required by invalids; or would work an article for the proprietor; strictest confidence (if desired). 84/61, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

"NOTES ON DISPENSING," for Pharmaceutical Students by George Stirling, consisting of hints on the manipulation of Mixtures, Pills, Emulsions, Suppositories, &c. Special notes on difficult pills and excipients, alphabetically arranged. Interleaved with blank paper for M.S. notes. Post free 13 stamps.

"DOSES OF NEW B.P."

Compactly arranged for vest pocket. Easily mastered, convenient for reference. Post free 6 stamps, from John Gower, Publisher, 47 Sigdon Road, Hackney, London.

DENTISTRY.—Mr. J. W. MARTIN, Manufacturing Dentist to the Profession, 46 Beckenham Road, Penge.—Best material and workmanship guaranteed; terms on application. Instruction given in all branches of surgical and mechanical dentistry; registered gentlemen, who have not had the advantage of a good dental education, are rapidly passed through a full course of instruction, which will enable them to practise dentistry in all its branches, for a fixed and inclusive fee.

A VALUABLE SPECIAL AGENCY.

DR. BIRLEY'S PREPARATIONS.—Large and Ready Sales.—48 page Pamphlets, gold covers, show-cards, &c., free; write to-day for samples. Gordon Murray & Co., 17 Castle Street, Holborn, London. Sole agents for Great Britain and India. "Baby's Blessing" and "Anti-Catarrh" may also be had.

PRELIMINARY AND MINOR.

ALL STUDENTS who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor. 6d. Chemist, care of Mr. J. Edwards, Wye, Kent.

L.D.S.R.C.S. EXAMINATIONS

(Sine curriculo).

TO REGISTERED Dentists only.—Increased successes in April, Royal Colleges of Surgeons, Eng., Irel., Scot. Mr. Graham's is no mere system of "cram," but a systematically arranged syllabus in which the subjects are treated exhaustively. It is a fact that out of 5,000 registered dentists only about one-seventh possess a surgical diploma. The concessions granted by the Colleges in respect of "sine curriculo" exams. will not always obtain. Candidates efficiently and expeditiously prepared. Particulars of course and fees on application to John Graham, 98 Queen Street, Exeter.

Estab. 1875. **OTTO WOLTERS**, Estab. 1875.

MANUFACTURER OF

ANALYTICAL, VACUUM, AND BULLION BALANCES.

Wolters' Improved Short-Beamed Analytical Balance,

A SPECIALTY. Assay and other Weights of every Description Made to Order. Balances for Exportation.

55 Up. Marylebone Street, Portland Place, London, W.

EXCHANGE COLUMN.

Limited to the Advertisement of Surplus Stock, Formulæ, Addresses Wanted, and Articles Wanted.

TERMS.

No Advertisement inserted in this section for less than Sixpence.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of $\frac{1}{2}$ d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount.

Remittances payable to EDWARD HALSE.

FOR DISPOSAL.

Drugs and Chemicals.

200 oz. Whiffen's quinine; highest offer. 223/30.

25 oz morph. hydrochlor., Smith's, will take 6s. an ounce. Johnson, Chemist, Bradford, Yorks.

Half-pound Aleppo scammony, 16s. 1b.; $\frac{3}{4}$ lb. iodoform, 14s. 1b.; 2 10s. of caryoph., 6s. 1b.; 3 lb. potass. iodid., 9s. 6d. 1b.; 4 lb. ess. limonis, super, 6s. 1b. J. C., Lingdale-in-Cleveland.

Chlorodyne, 4s. 1b. (or 3 lb. for Southall's boat); 6d. pomades, 3s.; 6d. worm nuts, 2s. 6d.; 1d. starch gloss, 6d.; 3d. vermin killer, 1s. 3d.; euonymin, 3s. 3d.; rubber urinals, cheap; various recipes, 1s. each. Cairnie, Thurso.

Proprietary Articles.

20 gals. King's patent carbolic seed dressing, in 1 and 2 gal. tanks; usual price 3s. 6d. per gal.; price for lot 2l., or useful exchange. T. H. L., 127 West Street, Crewe, Cheshire.

Apparatus.

One Dean's 2-gal. stone percolator, Doulton's, equal to new, price 15s. each. Particulars, Bingley, Northampton.

A few new instruments for chemical experiments, cheap; list and price on application. 222 23.

Quantity patents, including Crossby's maltine, Holloway's, Condy's, De Jongh's, isinglass, taraxacum, violet powder, &c., &c.; will send detailed list; must go. Bayne, 174 Cowcaddens, Glasgow.

Educational.

Set of illegible autograph prescriptions (original) 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1d.; new "Pharmacopœia," 5s.; lot of cheap, almost new, books; Attfield's "Chemistry," 1886, 12s.; Squire's "Companion," 1886, 8s. 6d.; carriage paid; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.

Shop Fittings.

Upright glass-case 62 x 44, shop and show bottles, cheap. Marston, East Dulwich.

Mahogany top counters, 10 ft. 6 in. and 7 ft. 6 in., with drawers and shelves. Kendall, Blyth.

Mahogany counter, 14 $\frac{1}{2}$ feet, with moulded mahogany-panel front, 5l.; dispensing-screen and case, counter, &c., 5l.; offers. H., 4 Stratford Road, Kensington.

Glass Bottles.—Job lines.—About 10 gross each 3-oz. white, opal, and turquoise blue pomades, screw nickel-capped, 18s. per gross; 10 gross 4-oz. ditto, 20s.; 12 gross 6-dr. oval essences, 4s.; 6 gross 10-oz. Kalis, with boxwood-topped corks, 18s.; 4 gross 4-oz. eau de Cologne, 10s.; 20 gross stoppered smelling salts, same shape as Godfrey's, 24s.; 10 gross each 1, 2, and 3-oz. turquoise covered pots, 16s., 20s., and 25s. per gross respectively; all best quality; sample of either kind post free 4 stamps, or of each line 18 stamps. Address, Hearn, 381-3 Kingsland Road, London.

Four 8-gallon carboys on stands, 20s. each; four 6-gallon ditto ditto, 16s. each; six 4-gallon ditto, 10s. each; 12-ft. range, polished pine drawers, with glass labels and knobs, 8l. 5s.; 10-ft. range, mahogany ditto, gold labels, and glass knobs, 7l.; desk and glass case, 50s.; 12-ft. range, mahogany drawers, glass labels and knobs, 10l.; 24 4-lb. best pink shop jars, 5s. each; handsome dispensing screen, with tablet in centre, 6 ft. long, 6l.; 15 dozen new shop rounds and jars, gold labelled, 9l. 15s.; illustrated list and estimates free. R. Tomlinson & Sons, Medical Fitters, Bond Street, Constitution Hill, Birmingham.

Surplus Stock.—Mahogany counter-case, 52 $\frac{1}{2}$ in. by 24 in. extreme, bent plate lifting flaps, sloping and flat shelves, 6l.; plate-glass fascia, embossed "Pharmaceutical Chemist," 146 $\frac{1}{2}$ in. by 14 in., 3l. 10s.; 3 15-in. marble mortars, 15s. each; pestles, 2s. 6d. to 5s.

Second-hand Glass, &c.—Specie jars: 1 scroll label, glass cover, 31 in. high, 35s.; pair ditto, 23 in. high, glass gilt covers, and 2-in. mahogany stands, 3l. 10s. Carboys: 1, 16-gal., cut stopper 40s.; 1, 12-gal. ditto, 30s.; 2, 9 $\frac{1}{2}$ -gal., plain stoppers and bulb ebonized stands, 60s.; 3, 4-gal., and stands, 37s. 6d.; 1, 3-gal., 5s.; 3, 1-gal., 7s. 6d.; 1 ditto, flat front, 5s. Cylinders: 1-gal., 2s. 6d.; 2-gal., 8s. 6d.; 3-gal., 5s. 4 scrolls, flat covers, 30s.; 6 doz. rounds, washed, no labels; 21 doz. bottles, jars, yellow paper labels, and contents for a surgery, 9l. 7s.; 24 green carboys, stoppered, japanned caps and labels; several lots ointment and extract pots. Remittances with orders. Hawke & Son, Wild Court, Great Wild Street, London, W.C.

Formulæ.

Send for my list of recipes, cheap and reliable. "Chemist," Edwards, Wye.

A tempting offer.—Worth 10l.; for 5s. I will send post free formulae for Persian Boquet, same as Lewin's. T. Booker, Chemist, Boston, Lincolnshire.

200 reliable recipes for preparations in everyday use. The latest addition is "Lanoline Toilet Cream," a delightful preparation from the new material "Lanoline;" must find a ready and profitable sale with every chemist as a novelty. Single recipes, 1s. 1d. each; three for 2s. 6d. Complete list posted on receipt of address. 63/45.

Set 15 practical recipes, with full instructions, for gonorrhœa, gleet, syphilis, buco, and all forms of venereal disease 3s. 6d.; glycerine, cucumber, and houseleek for the skin (time of year is coming on for stocking these plants), 2s.; wanted one Southall's Norway boat; lowest figure to A. Johnson, 64 Furness Hill, Sheffield.

Extraordinary Offer!—For half-crown Postal Order or stamps, following recipes post free (as sample):—"Herbalad," a concentrated compound botanic extract (like Masou's), for making aromatic herb beer, at 4d. gallon, delicious, appetizing, sparkling; "Limes and Glycerine," elegant, snow-white, perfectly inseparable, guaranteed best and cheapest extant; "Hop Tonic" (instant), splendid preparation in every respect, costs under 1s. 1b.; "Spring Blossom," most lovely and enchanting perfume (resembles Gosnell's), adapted for Jubilee or local name; detailed list free. T. Brooks, Chemist, Louth.

Soluble essences (non-alcoholic, for mineral waters); lime-juice cordial; chlorodyne (perfectly transparent); cascara sagrada cordial; concentrated waters (1 to 40); essence rennet (permanent, no salt); hop bitters; liquor carbonis (resembles Wright's); chemical liquors for syrups (stable); lac rosarum (inseparable, made in few minutes); ink (resembles "Dichroic"); elixir phosphori, invigorating tonic; sponges bleached (golden yellow); liquid dentifrice (like "Floriline"); marking-ink, fine silver, writing executed defies chemicals; salino (Eno's or Lamplough's); magic neuralgic drops; lime-juice and glycerine (white as milk, inseparable); pill-coating, pearly white, no mastic or mucilage; crimson marking-ink; hair-restorer, colourless, no deposit, fine silver; oleum davum concentratum, stable colour for pomades; soluble ginger (like Hay's); liquor copaiba comp. c. buchu et matico (like Richardson's); liquor santal. flav. (resembles Hewlett's); taraxacum podophyllin, iron quinine (both resemble Pepper's); many perfumes, also toilet requisites; state wants; lists issued; all inexpensive to prepare; 5s. each (5 for 1l.); analyses undertaken. Readers are warned against cheap substitutes. I was first to advertise formulae in this journal. "Analyst," Mr. Warnes, 6 Rochester Square, N.W. (Only prepaid inquiries answered.)

Miscellaneous.

Cyclostyle, good as new, cost 27s. 6d., half price, Riddle, Cuthbert Street, South Shields.

A pair of 49-inch crutches, with springs, as Maw's Fig. 3, almost new. Willis, New Brompton.

Low-priced shares to be sold in companies doing large business with Chemists; last dividends paid 10 per cent. Apply, 99/100.

Still's two small, worked separately or combined Address, "Ozone," Gale Street Distillery, Chelsea, S.W.

Wholesale bottles, new; baking powder, insect powder, and coffee tins, new; drug mill; marshmallow leaves; gentian root; show-cases, new; pressed herbs, large variety, in ounce packets; herb presses; weighing machine. Macaulay, Chemist, Wakefield.

WANTED.

Cooley's "Encyclopædia," 6th edition. State price to Grimbly & Kent, Boston.

Good English-Latin Latin-English Dictionary; state price. Herington, Leighton, Buzzard.

Good counters, with drawers, cheap. Buckley, Hetton-le-Hole, Durham.

Chemist's round outside lamp, with solid glass lenses. S., 38 High Street, Notting Hill, W.

A small dental show-case, with or without specimens. Waterhouse, High Street, Ramsgate.

Half or one gallon tincture press, Pinder's double-action preferred. Barnes, Fishergate, Preston.

Druggists' counters, panelled fronts, drawers behind, 11 $\frac{1}{2}$ ft. by 26 in. and 5 $\frac{1}{2}$ ft. by 26 in.; also 7-ft. nest mahogany-fronted drawers. Particulars to Robinson, Chemist, Haworth, Keighley.